JUNE, 1952

Textile Industries

formerly COTTON Textile Industries

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for all textiles . . .

Marquette
Roller Bearing Spindles
WITH FULL-FLOATING
FOOTSTEP BEARING

give you More Yarn at lower Cost

PROTECTED BY U.S. AND FOREIGN PATENTS AND PATENTS PENDING

The Marquette METAL PRODUCTS COMPANY
CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

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Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS • PRECISION PARTS AND ASSEMBLIES
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • FUEL OIL INJECTORS

FACTORING

More and more, the word "COMMERCIAL" is recognized as the "distinguishing mark" in factoring. It is the symbol of long experience, complete facilities and resources, and a knowledge of every branch of the textile industry.

We will gladly explain in detail what *COMMERCIAL FACTORING* can mean to your business in new opportunities and increased profits.

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T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA

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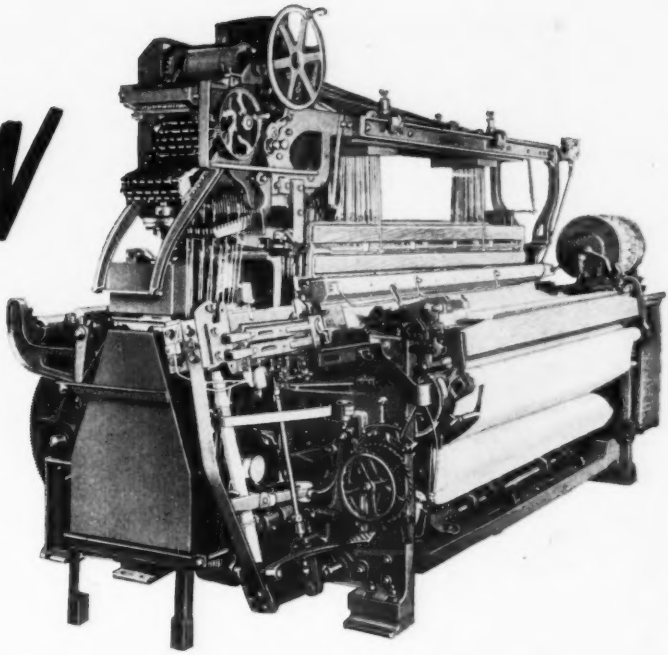
Volume 116 Number 6

The NEW XD



with the 2 x 1 FILLING MIXING MECHANISM

- **ELIMINATES**

  The unevenness in cloth due to variations in filling.

- **RANGE OF FABRICS**

WOOL BLENDS	GABARDINES
DACRON	PLAIN OR FANCY TROPICALS
ORLON	SERGES
NYLON	CROSS DYES
RAYONS	PIECE DYED WORSTEDS
ACETATE	SHEENS

The new Draper XD model loom is now available with:

- 2 x 1 Box Motion

OR

- Single Shuttle
- W-2 Worsted Head

OR

- Dobby

Conventional widths up to 80" reed space to give 72" cloth off the loom. Yarn Beam can be furnished up to 32" Dia.

DRAPER *Corporation*

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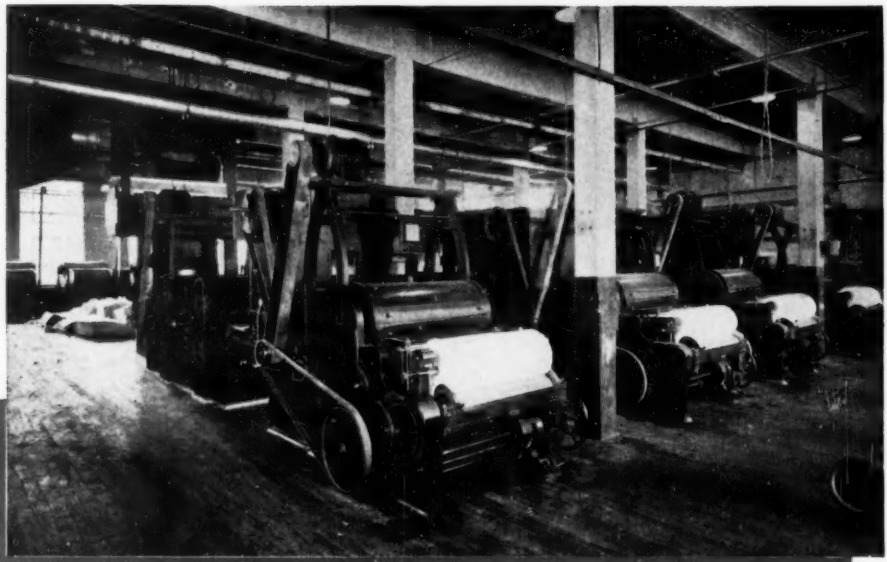

ASSURE SMOOTHER, STRONGER, MORE UNIFORM YARN...

...by conditioning with TEXACO TEXSPRAY COMPOUND

You can step up the quality of your yarn and raise production efficiency when you condition fibres with *Texaco Texspray Compound*. That's been proved by more than 15 years' experience in leading mills.

Texaco Texspray Compound softens brittle fibres, prevents breakage of long staple, helps maintain a uniform yarn count. You'll get stronger yarn, have fewer ends down. *Texaco Texspray Compound* also minimizes static, reduces "eyebrows." It's easy to apply, economical to use.

To get longer life from your grease-lubricated anti-friction bearings, and reduce maintenance costs, use *Texaco Regal Starfak*. It's definitely superior to ordinary grease in resistance to oxidation, gum formation, separation and leakage. Lasts longer, too.

Let a Texaco Lubrication Engineer show you how Texaco Lubricants can increase efficiency and reduce costs all through your mill. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, New York.

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

Faithfully yours 50 TEXACO *for Fifty Years*

TUNE IN . . . TEXACO STAR THEATER starring MILTON BERLE on television every Tuesday night. See newspaper for time and station.

ABC NBP

Textile Industries

COTTON

Volume 116, Number 6
June, 1952

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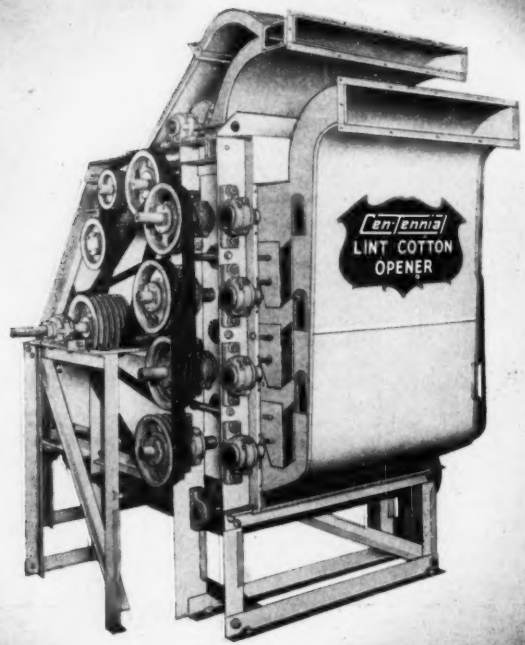
Editorial and Executive Offices: 806 Peachtree St., N. E., Atlanta 5, Georgia

For names and addresses of editorial and business representatives, see page 199

ANNOUNCING
the
Cen-Tennial
COTTON OPENER



22% Saving in Good Cotton
that Formerly Went to Waste

The Cen-Tennial Cotton Opener is a product of years of research by Southern Regional Research Laboratory, and thoroughly proven by mill experience. It gives many advantages which result in better opening room efficiency, including less waste and a cleaner picker lap. Decidedly worth your investigating. Write for full particulars.

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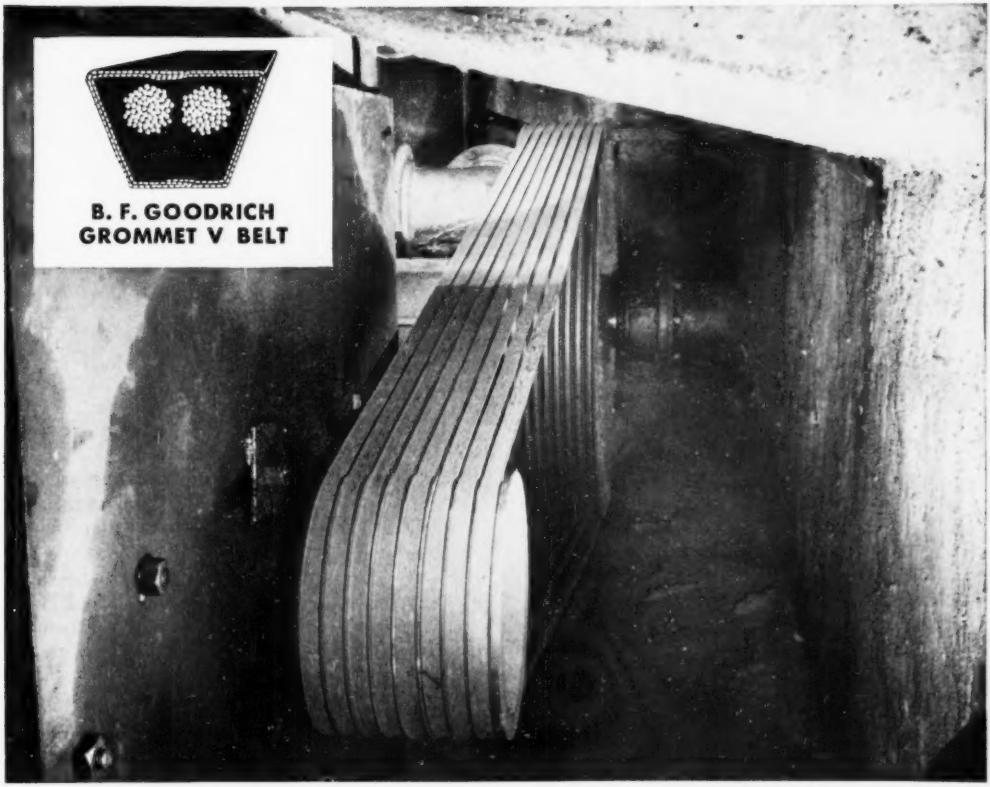
RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER



B.F.Goodrich grommet belts saved $250.00 a year

B. F. Goodrich grommet V belts cut costs 20 to 50%

THESE belts have to run 24 hours a day under terrific tension. Ordinary V belts used to snap in two, fly off this drive in only 4 months. In September 1950, B. F. Goodrich grommet belts were installed. They have already lasted 4 times as long as previous belts, still look good, and are saving over $250.00 a year in replacement costs. Here's why B. F. Goodrich grommet belts can be counted on to save on belt costs:

No cord ends—A grommet is endless, made by winding heavy cord on itself to form an endless loop. It has no overlapping ends. Because most of the failures in ordinary V belts occur in the region where cords overlap, the endless cord section in a grommet V belt eliminates such failures.

Concentrated cord strength—All of the cord material in a B. F. Goodrich grommet multiple-V belt is *concentrated* in twin grommets, positioned close to the driving faces of the pulley. No layers of cords to rub against one another and generate heat; cord and adhesion failures are reduced.

Better grip, less slip—Because a grommet is endless, a grommet V belt is more flexible, grips the pulleys better. Size for size, grommet multiple-V belts will give ⅓ more gripping power, pull heavier loads with a higher safety factor.

Only B. F. Goodrich has the grommet!—No other multiple-V belt is a grommet V belt (U. S. Patent No. 2,233,294). Now available in C, D and E sections. See your local B. F. Goodrich distributor. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Grommet V Belts BY
B.F.Goodrich
RUBBER FOR INDUSTRY

The RIGHT GRIP for the particular fabric you're weaving

Heavy duck or standard cotton or sheerest silk—there's a specific grading of TEXALOX roll covering to provide the ideal solution to your take-up roll problem.

TEXALOX covering is infinitely superior to the cork, rubber, sandpaper and perforated tin which it was originally designed to replace. Expressly created for the textile industry by CARBORUNDUM, this flexible, granular, metal-sprayed surface has served some mills for more than ten years without showing evidence of wear.

But—look at these other plus benefits...perfect grain spacing means an even grip, and delivery of definite lengths...grains of varying fineness for each different fabric...impervious to oil and grease, and doesn't accumulate them or produce a stained fabric...prevents cuts and chafe marks.

Try TEXALOX roll covering on your looms now. We'll gladly send you a sample length free of charge. Ask your CARBORUNDUM or distributor salesman —or write Dept. TI 82-70.

TEXALOX

sure-grip take-up roll covering by CARBORUNDUM

TRADE MARK

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82-70

Now do you think all Chromium Plating is the same?

I told you to have 'em Walhard plated!

When you're on this spot . . . you need the boys from Walton and Lonsbury on your side!

There is no such animal as "cheap hard chromium plating." In rejects, replacements, yarn spoilage, etc., you'll pay and pay for inferior hard chromium plating.

Let's face it! Only hard chromium plating engineered to do your specific job is worth buying! Why not have the job done right the *first* time?

THE LEADING NAME IN TEXTILE HARD CHROMIUM PLATING!

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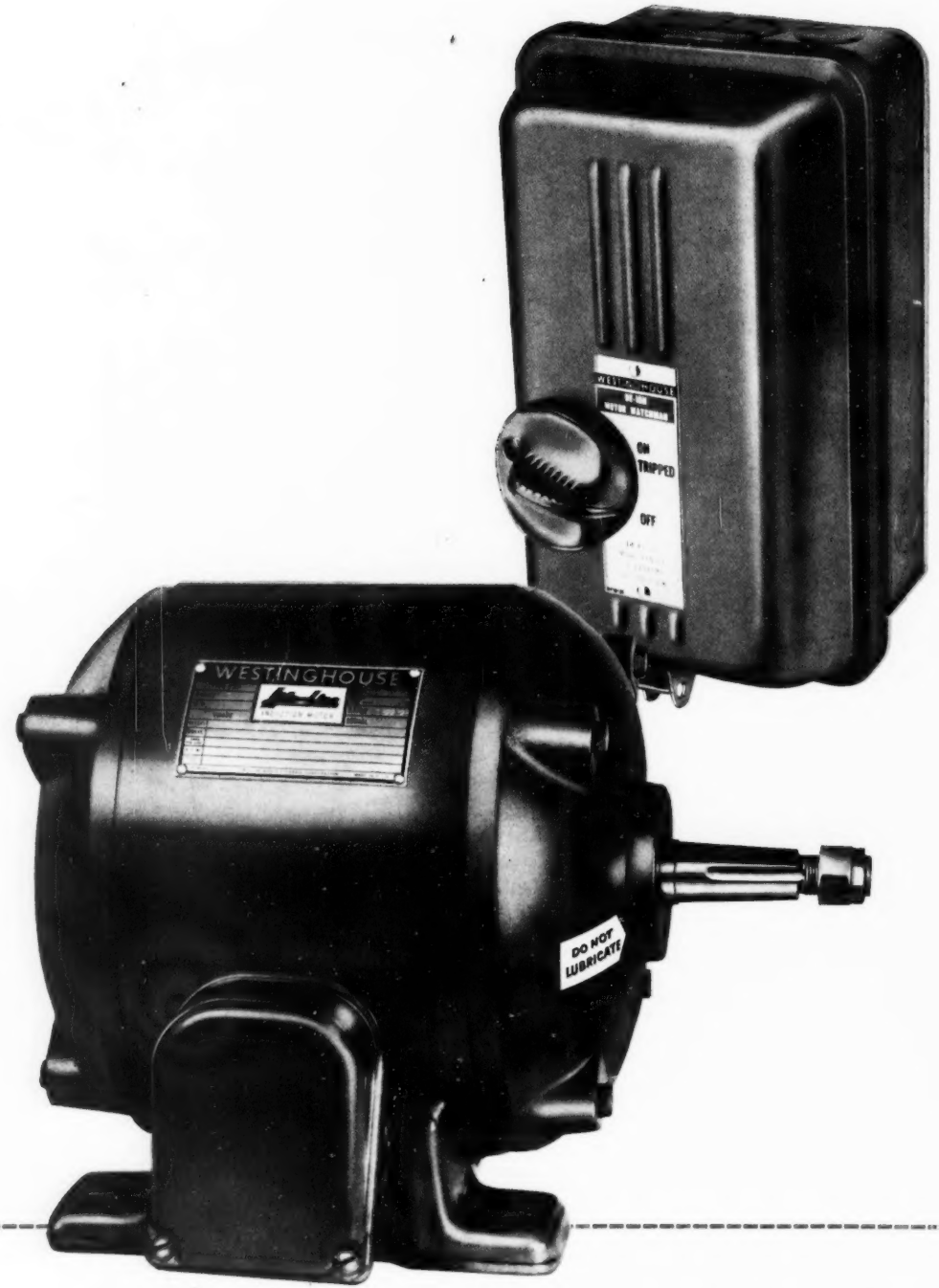

WHAT *Life-Lines* REALLY DELIVER IS MORE SERVICE...LESS SERVICING

The way to lick lint and dust is to keep it out!

And here's a drive team that really keeps it out!

Look at the extra features of the Loom Motor Starter. A special neoprene gasket forms a positive, continuous seal between case and cover. Pressure from cover-retaining screw makes sure every crevice is filled with pliable neoprene. It's the only starter approved by the Associated Factory Mutual Fire Insurance Companies.

And check the extras on the totally enclosed Loom Motor, too. No chance for lint or dust to clog windings. Notice, too, there are no greasing nipples or cups on the motor. Pre-lubricated, factory-sealed bearings need no lubrication. Thus, outages from both lint clogging and improper lubrication are eliminated.

Together these two make the best drive team for your weave-room equipment. Maintenance has been practically engineered out. Ask your Westinghouse representative for a free copy of, "Motors and Controls in the Textile Industry". Thirty-six well-illustrated pages show how to overcome problems in drive selection. Ask for B-5422, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21688

YOU CAN BE SURE...IF IT'S
Westinghouse
Life-Line
MOTORS and CONTROLS

At last!

IMMEDIATE-POSITIVE INDICATION OF LAPS

FRONT VIEW—SHOWING INDICATOR PANEL of MODEL M-100 for COTTON SLASHERS.

plus . . .

- ★ WET STREAKS
- ★ BLANKET DEFECTS
- ★ SQUEEZING TROUBLES
- ★ MOISTURE CONTENT

All shown on the dial of the

MOISTURE MONITOR

Tested and proved on complete installation for over a year in a large Southern Cotton Mill.

NOW IN PRODUCTION AND READY FOR YOU . . . . . .

- ★ SIMPLE
- ★ RUGGED
- ★ DEPENDABLE
- ★ LOW-COST
- ★ TROUBLE FREE

$450.00 COMPLETE

With STAND, CABLES AND DETAILED INSTRUCTIONS

Write for complete details

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ENGINEERING LABORATORIES
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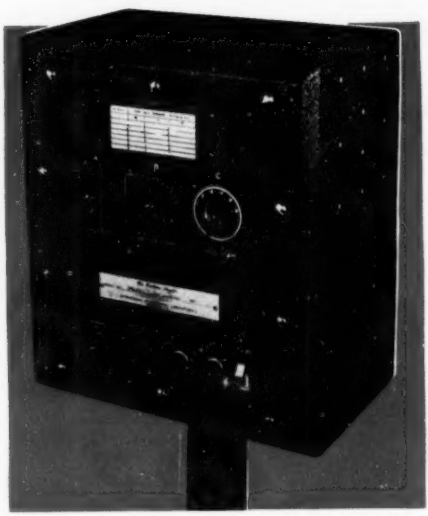
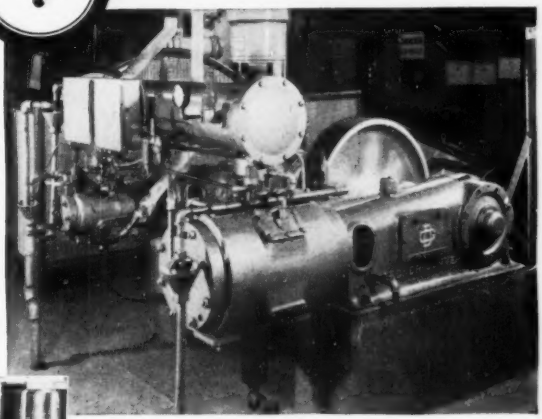


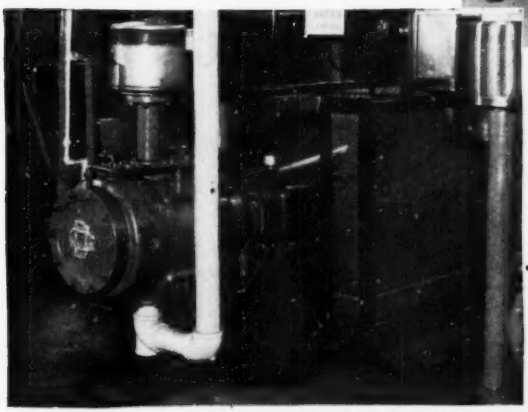
BACK VIEW—SHOWING 3 RANGE SELECTORS.

for working under any pressure

from 20 to 1000 pounds

Need compressed air at 20 pounds—100 pounds—1000 pounds? Gardner-Denver RX Horizontal Air Compressors can meet your needs exactly—with an efficiency that conserves power dollars like a miser. They're built for continuous, full-capacity service, with heavy-duty features such as extra large water jackets and unrestricted air passages. Write for complete details.



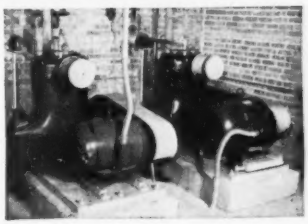


Here's an RX installation that supplies compressed air at 1000 pounds per square inch working pressure.

This RX Compressor runs 20 hours per day, 6 days per week, and has proved so satisfactory the owner soon ordered another RX.

and here's a sturdy compressor for years of continuous service

The Gardner-Denver AA Compressor is designed with generous bearing areas, extra large water jackets, forced feed lubrication and many other features that assure uninterrupted service and low maintenance.



SINCE 1859

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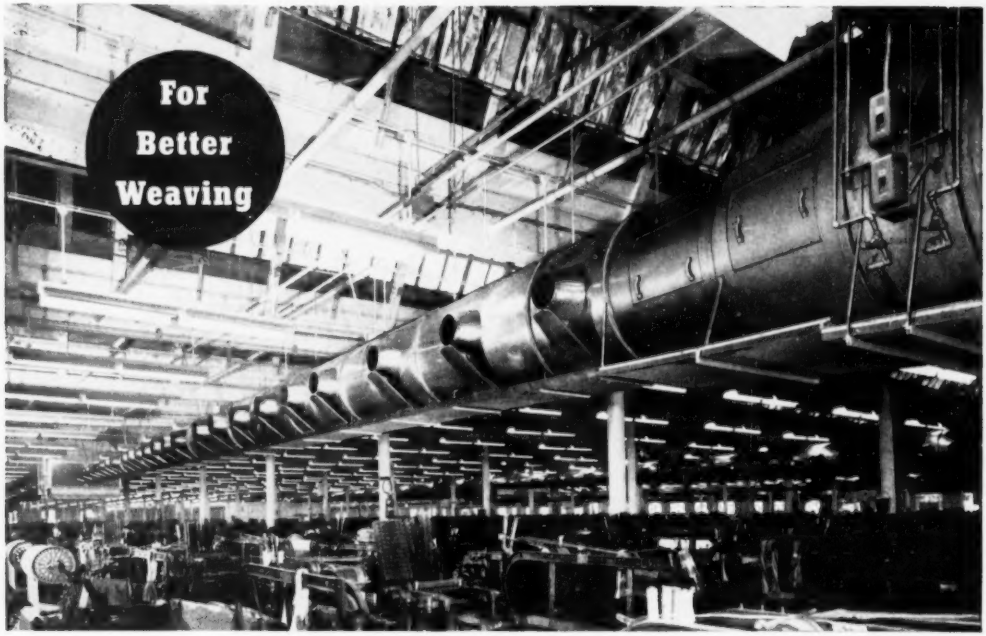


Bahnson HUMIDUCT Air Conditioning Systems

In this Cotton Weave Room Bahnson Humiducts maintain proper temperature and relative humidity. Regain is correct, tension is uniform. There is less yarn breakage so loom stops are at a minimum. Dust and fly are reduced, cloth is cleaner and of uniform high quality. Looms operate at higher speeds. Operators work better in a fresh, cool, comfortable atmosphere.

It all adds up to higher efficiency—better weaving. Humiducts are ideally suited for this air conditioning task. They can maintain the required relative humidity by supplying supersaturated air—no boosting with atomizers is required. Ducts are located to provide horizontal circulation of air for better uniformity and lower effective temperature. Each Humiduct is a complete air conditioning unit, located within the room, and no expensive apparatus houses are required.

Each textile operation requires careful selection of equipment so that the many benefits of air conditioning are obtained economically. Bahnson can select, from the widest range of air conditioning equipment offered to the textile industry, the proper system for your needs.

FULL VALUE . . . .
FOR YOUR AIR CONDITIONING DOLLAR

Bahnson Company
ENGINEERS AND MANUFACTURERS
WINSTON-SALEM, N. C.

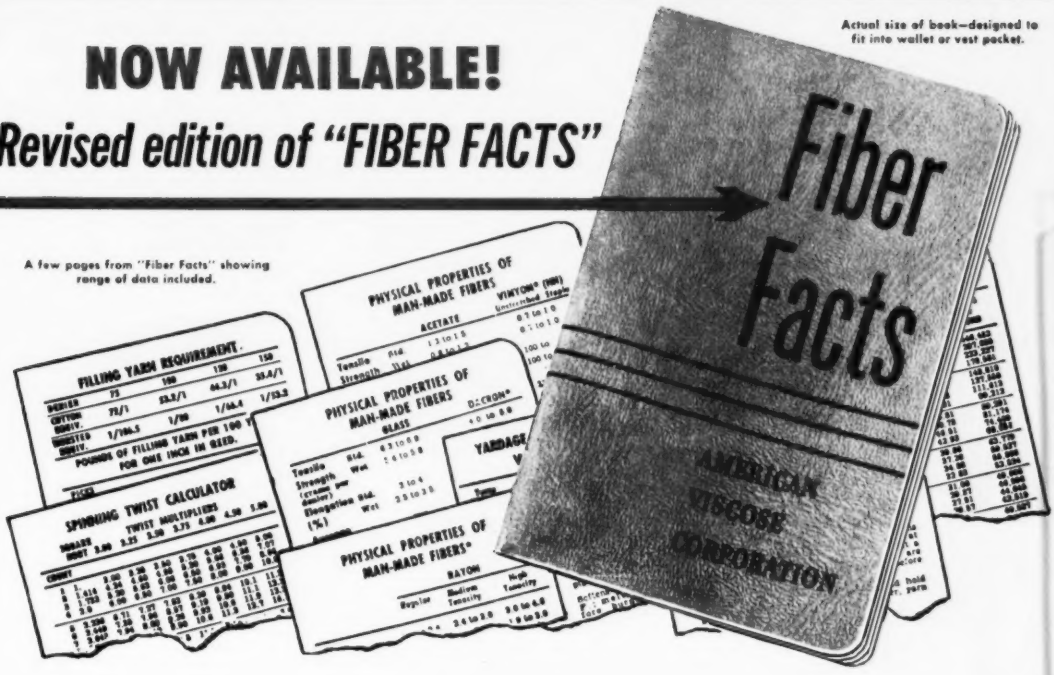
Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y. June, 1952

NOW AVAILABLE!

Revised edition of "FIBER FACTS"

Actual size of book—designed to fit into wallet or vest pocket.



A few pages from "Fiber Facts" showing range of data included.

1952 edition of useful vest pocket handbook ready for distribution

Avisco's "Fiber Facts," the useful and popular vest pocket handbook, has been revised to include up-to-the-minute facts which have become available during the past year. The first of its kind, this little compendium of essential information on textiles has proved to be an essential tool to many mill executives and others in the industry. Users report that its information-packed pages enable them to keep basic data at their finger tips and thus minimize the need for search through bulkier technical works.

Often needed information on Avisco and its products, comprehensive tables on such subjects as physical properties of rayon and other synthetic fibers, denier conversion, spinning twist calculations and yarn requirements are presented in digest form. The contents include a glossary of textile terms, a bibliography of rayon publications, a calendar, and space for memoranda.

Everyone actively working with man-made fibers will want this revised edition of "Fiber Facts." Write on your firm's letterhead for your copy.

Send for your copy of "Avisco serves the Knitting Industry." This information-packed booklet highlights the newest developments by Avisco for the knitting industry. You will find technical and descriptive information on Avisco products, swatches of tricot fabric developments, a flow chart showing a new proposed continuous tricot dyeing process. Write for your copy using your firm's letterhead.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

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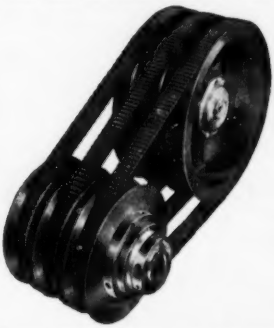
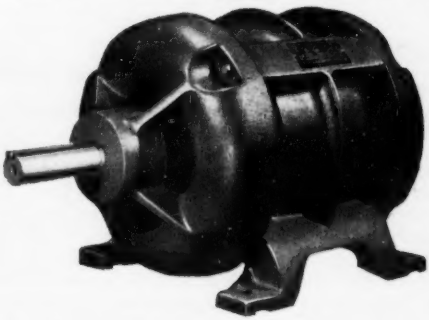
Built to Work

From Power Line to Machine

ALLIS-CHALMERS
TEXTILE DRIVES





YOU WILL SAVE MONEY by getting your complete machine drives from one dependable source. When you use Allis-Chalmers coordinated drive components, you can be sure that they will be installed easily and quickly and that they will work together to give you dependable service at lowest possible cost. One reliable manufacturer guarantees the satisfactory operation of your complete machine drive.

COMPETENT APPLICATION ENGINEERING

Allis-Chalmers application engineers, practical men with an intimate knowledge of the textile business, will help you select the best combination of motor, drive and control for your particular requirements.

If you are building a new mill or modernizing your old mill for higher speed operation and lower costs, discuss your drives with the Allis-Chalmers representative in your territory. He can help you plan for more profit. Allis-Chalmers, Milwaukee 1, Wisconsin. A-3708

Texrope, Quick-Clean and Vari-Pitch are Allis-Chalmers trademarks.

Allis-Chalmers Textile Specialists

are located in the following cities:

Atlanta, Georgia
Birmingham, Alabama
Boston, Massachusetts
Charlotte, North Carolina
Chattanooga, Tennessee
Dallas, Texas
New Orleans, Louisiana
Richmond, Virginia

Better Together

MOTOR CONTROL

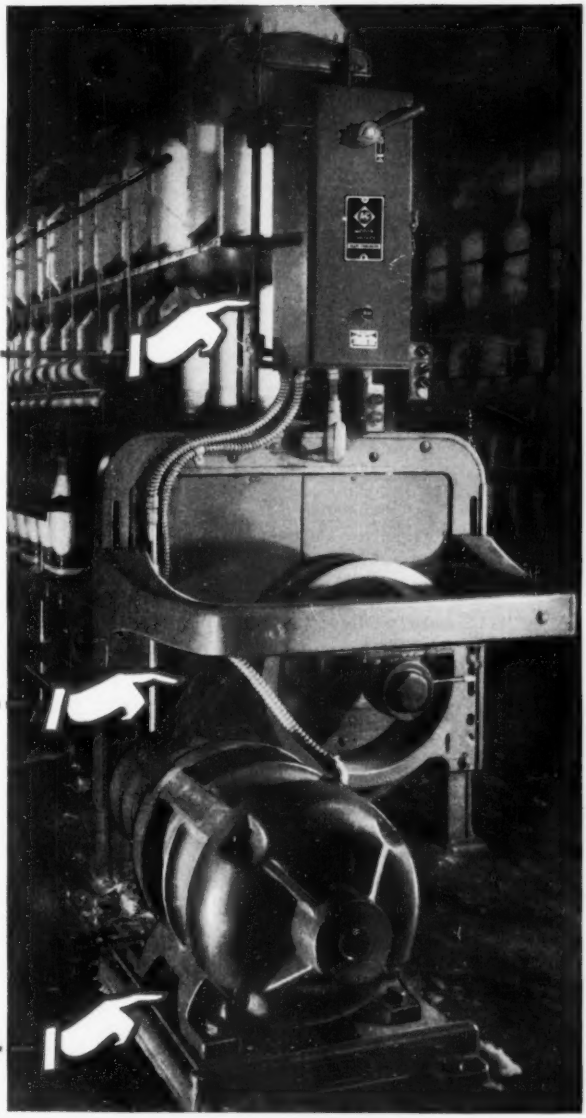
Standard types of textile motor control built to operate with Allis-Chalmers loom motors, *Quick-Clean* motors and all other Allis-Chalmers motors used in the textile industry. This is a full voltage AC magnetic starter with fusible disconnects which provides overload and undervoltage protection. Other starters are available for special service such as slow speed starters for card drives, loom switches and many other types preferred by textile mill operators. Enclosures may be lint-proof with interlocked cover handles for safety.

TEXROPE DRIVE

Texrope V-belt drives, the original multiple V-belt drives for textile machinery, are available in both fixed and variable speed types. More and more mills are finding that the moderate extra cost of *Vari-Pitch* sheaves comes back many times in increased machine versatility and more precise quality control as well as reduced down-time for change-overs. With either Stationary Control or Motion Control *Vari-Pitch* sheaves, speeds can be accurately adjusted quickly and easily. Wide Range *Vari-Pitch* Sheaves cover complete operating range of most machines with one drive.

TEXTILE MOTOR

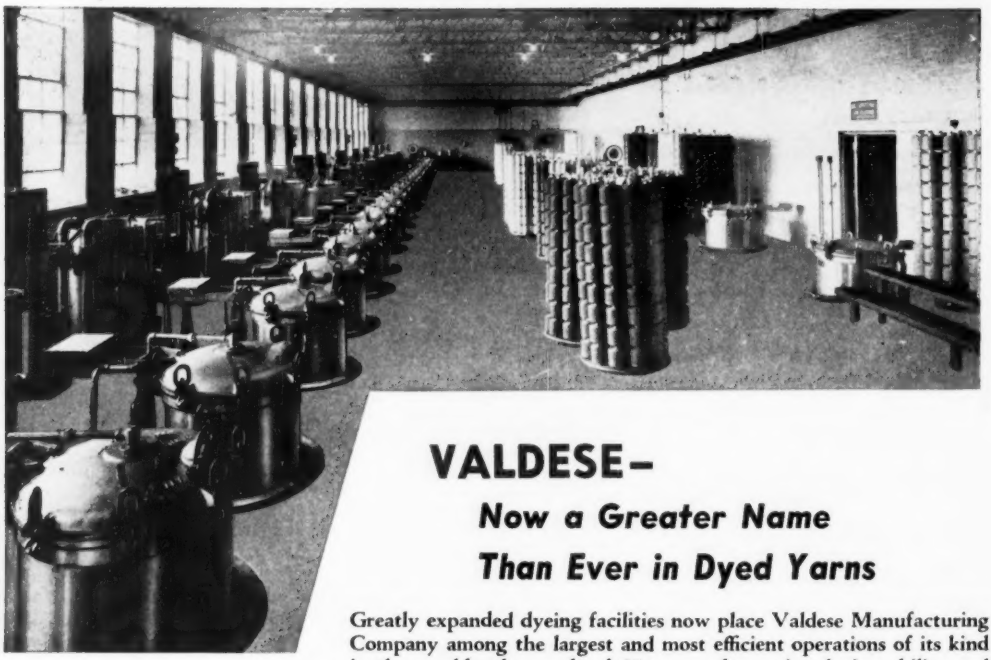
Quick-Clean motors are of special wide-open design which cannot trap lint, overheat and burn out. Powerful fans sweep lint-laden air into the motor and right out again through large, unobstructed ventilating openings. All internal air passages are smooth, hard and streamlined so that lint cannot lodge. *Quick-Clean* motors are built with special acceleration and torque characteristics to meet special requirement of roving frames, cards and other machines. A special totally-enclosed, non-ventilated loom motor also is available.



ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

from QUALITY AND SERVICE—*Growth*



Recent installation of Gaston County Dyeing Equipment at Valdese Manufacturing Co., Valdese, N. C.

VALDESE—

Now a Greater Name Than Ever in Dyed Yarns

Greatly expanded dyeing facilities now place Valdese Manufacturing Company among the largest and most efficient operations of its kind in the world—the result of 25 years of superior dyeing ability and superior dyeing equipment.

SERVICE... The new 24-kier battery of 350-pound machines, turning out well over 100,000 pounds of dyed yarn weekly . . . and warehousing facilities for one-half million pounds of yarn, assure Valdese customers of prompt delivery in all counts and descriptions of dyed yarn.

QUALITY... Specialists in dyeing soft-twist yarns for the knitting trade, Valdese is noted for the brilliance of its colors. Valdese directs, developes, vats, napthols, bleached and bleached base pastels enjoy a top reputation with men in the trade.

Valdese is equipped throughout with Gaston County machinery, and has been for more than 25 years . . . a selection based on continued dyeing satisfaction.

Albert R. Breen
80 East Jackson Blvd
Chicago, Ill.

Gaston County Dyeing Machine Co.
Terminal Building
68 Hudson St., Hoboken, N. J.
G. Lindner, Mgr.

The Rudel Machinery Co., Ltd.
614 St. James St., W., Montreal
137 Wellington St., W., Toronto

GASTON COUNTY DYEING MACHINE CO.

STANLEY, N.C. U.S.A.

National Aniline Dyes
can give your new lines the plus-value of exciting eye-appeal so needed in today's markets. If you are contemplating a new fiber or blend in your new fabrics, weaves or prints, National Aniline can advise on the colors that will provide optimum properties.
For practical help on difficult dyeing or printing jobs, ask National Technical Service to provide precise matches and trouble-free formulas. And for prompt delivery from nearby warehouse stocks, always phone National Aniline first.
NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y. • Boston • Providence • Philadelphia • Chicago
San Francisco • Portland, Ore. • Greensboro • Charlotte • Richmond • Atlanta
Columbus, Ga. • New Orleans • Chattanooga • Toronto

Now an Important Part of the American Market

Thomas Hodges Corp.

OFFERS

yarns and staple fibres

PRODUCED BY

Farbenfabriken Bayer

(FORMERLY I. G. FARBEN)

Nylon

(PERLON)
POLYAMIDE FIBRE

30 DAY DELIVERY

1½-20 denier
1½" to 6" staple cuts. Bright, dull, extra-dull. Natural and 28 stock dyed colors.
TOW 2.75 to 6 denier—100,000 aggregate denier.
Filament Yarn 1800 denier and up

Cuprama

RAYON STAPLE FIBRE

The most wool-like fibre from a cellulose base available anywhere in the world. Feels like wool! Looks like wool! Spins like wool!

3 WEEK DELIVERY

1½-20 denier
1½" to 6" staple cuts. Natural or dope dyed (solution dyed) in 28 colors. Any shade in 5 ton minimum lots.

Cupresa

CONTINUOUS FILAMENT CUPRAMMONIUM RAYON YARN

25 - 150 denier.
Natural and dope dyed (solution dyed) in 28 colors. Any shade in 5 ton minimum lots.

*Reg. appl. for

Featuring
CONTROLLED UNIFORMITY...
for greater manufacturing efficiency and a better finished fabric.

THOMAS HODGES CORPORATION
11 W. 42nd St., New York. Tel. BR 9-1628-1629-1630
Warehouse, Box 86, Kearnysville, W. Va.

Sole sales representatives of Farbenfabriken Bayer (Formerly Famous I. G. Farben) Chemical Fibre Division

Standafin 77

stands the test of **Time** on

WHITES

HERE'S A FINISH for milady's undergarments that does not discolor whites and pastels even under long storage.

On rayon, acetate and nylon fabrics Standafin 77 imparts a pleasing, durable finish having excellent drape and nonslip properties. (Interesting effects are also obtained on spun fabrics.)

Standafin 77 is a water soluble resin easily applied on conventional finishing equipment. No curing is necessary.

Our technical staff has facts and figures to prove that Standafin 77 stands the test of time . . . fabrics finished with Standafin 77 remain white indefinitely during mill or shelf storage.

STANDARD CHEMICAL PRODUCTS, Inc.

1301 JEFFERSON STREET, HOBOKEN, NEW JERSEY

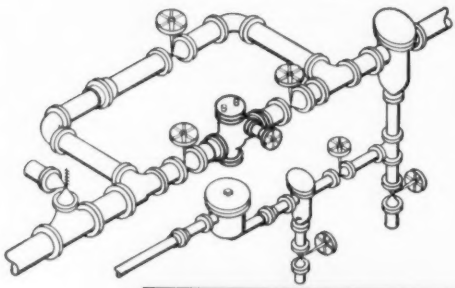
Chattanooga, Tenn. • Paterson, N. J. • Providence, R. I. • Salisbury, N. C.
Sunbury, Pa. • Sacramento, Cal. • Greensboro, N. C. • Leaksville, N. C.

Manufacturer of: Pyrotex — Standapol* — Stanteosine — Retardine* — Standafin — Stantex*

*Reg. U. S. Pat. Off.

Can Your Pressure Regulators Match This Service Record?

...on a Steam Kettle for instance



THE INSTALLATION

On steam supply line to cooking kettle, Schoenling Brewing Company, Cincinnati.

THE HISTORY

Specifications for this installation called for a regulator to reduce main line steam supply at 100 psi to 30 psi, and automatically maintain the reduced pressure to cooker, 24 hours daily, without significant fluctuation.

A Crane Pressure Regulator with factory pre-set range was selected and properly installed with adequate, automatic drainage of the steam lines.

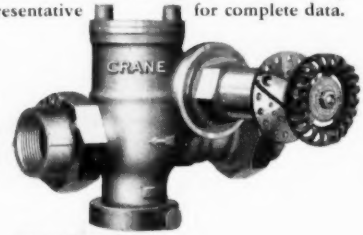
For 16 years, throughout its lifetime, the Crane Pressure Regulator did its job to the brewery's complete satisfaction. Never was it out of service; never did it require more than the simple prescribed periodic inspection. (Note: current model has renewable wearing parts; will virtually never wear out.)

VALVE SERVICE RATINGS

SERVICE LIFE:	16 years - 24 hours per day
MAINTENANCE COST:	None - simple servicing only
SPECIAL FEATURES:	Good pressure range - easy adjustment
SUITABILITY:	Steady flow - no pressure build-up
OPERATING RESULTS:	Accurate control of cooking process
PRICE:	Low - considering service life
AVAILABILITY:	Stock item - Crane line

THE VALVE

Crane No. 960 Brass Pressure Regulators are made for reducing steam or air pressures up to 250 pounds, to within 80% of inlet pressure. They are factory pre-set to operate within any of 4 ranges from 1 to 200 pounds, with easily selected outlet pressure within set range. Precision made, they are fully automatic, highly dependable, even under reasonable fluctuation of inlet pressure. All wearing parts renewable. See your Crane Catalog or Crane Representative for complete data.



The Complete Crane Line Meets All Valve Needs. That's Why

More Crane Valves Are Used Than Any Other Make!

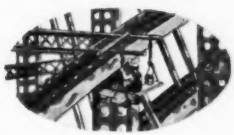
CRANE VALVES

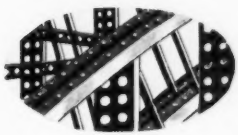
CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Illinois

Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

Preparation for a trouble-free finish...





WHAT HAS A BRIDGE TO DO WITH TEXTILES, you ask?

Well . . . for one thing they both need *preparation for a fine finish:* the bridge needs its vital rust-resisting prime coat of red lead prior to the finish coats; and textiles need the vital de-sizing operation prior to bleaching and dyeing.

Which brings us—naturally—to Diastafor de-sizing agent.

Diastafor *works*. It works in an unusually wide range of temperatures and pH, a range which will satisfy your every enzyme de-sizing requirement. And more—you will discover it works with ease, speed and economy.

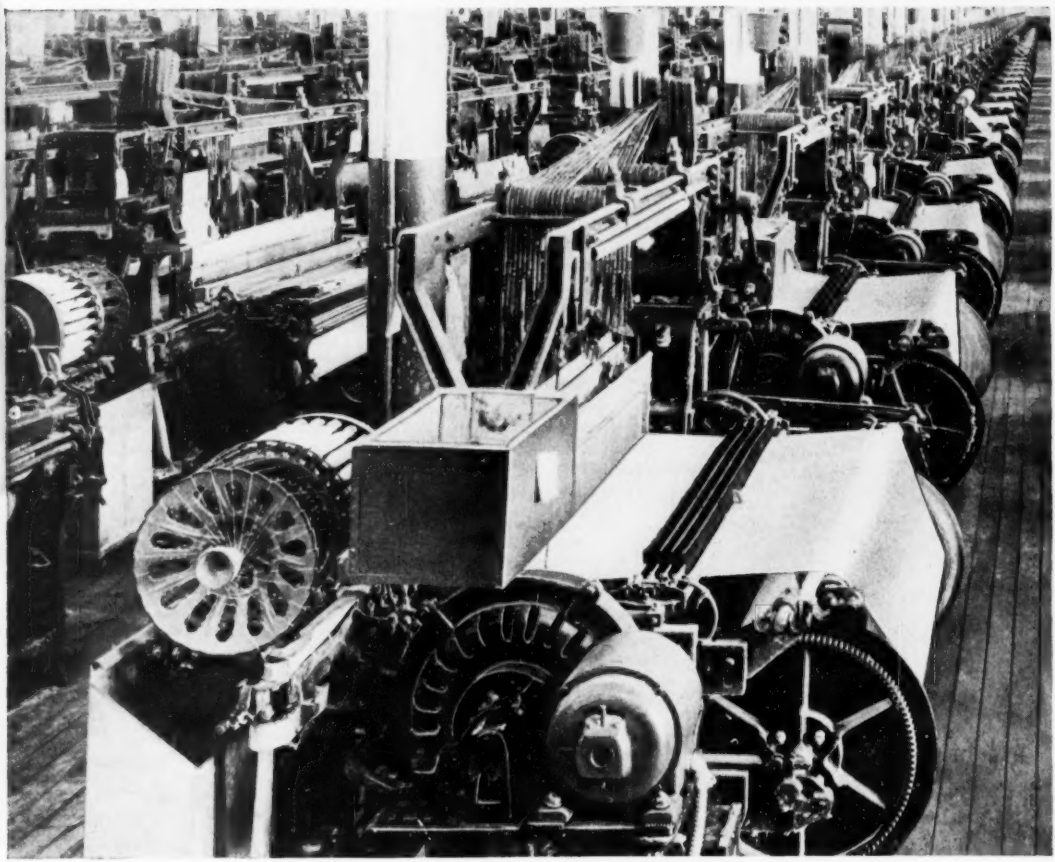
No matter under what conditions you may be working—with various lots . . . with variations in water and sizing formulas . . . with cottons, rayons or mixed goods—Diastafor, available in types L, LC and D, will prove itself to you, in your own mill. Try it for either the continuous or batch process. Remember: it has been a leader in its field for 44 years!

Our sales and technical staffs are ready to save you time and trouble. For your own trouble-free finish, consult us. Standard Brands Incorporated, Diastafor Department, 595 Madison Avenue, New York 22, New York.

DIASTAFOR

A TRADE MARK OF STANDARD BRANDS INCORPORATED

PROVED IN USE!



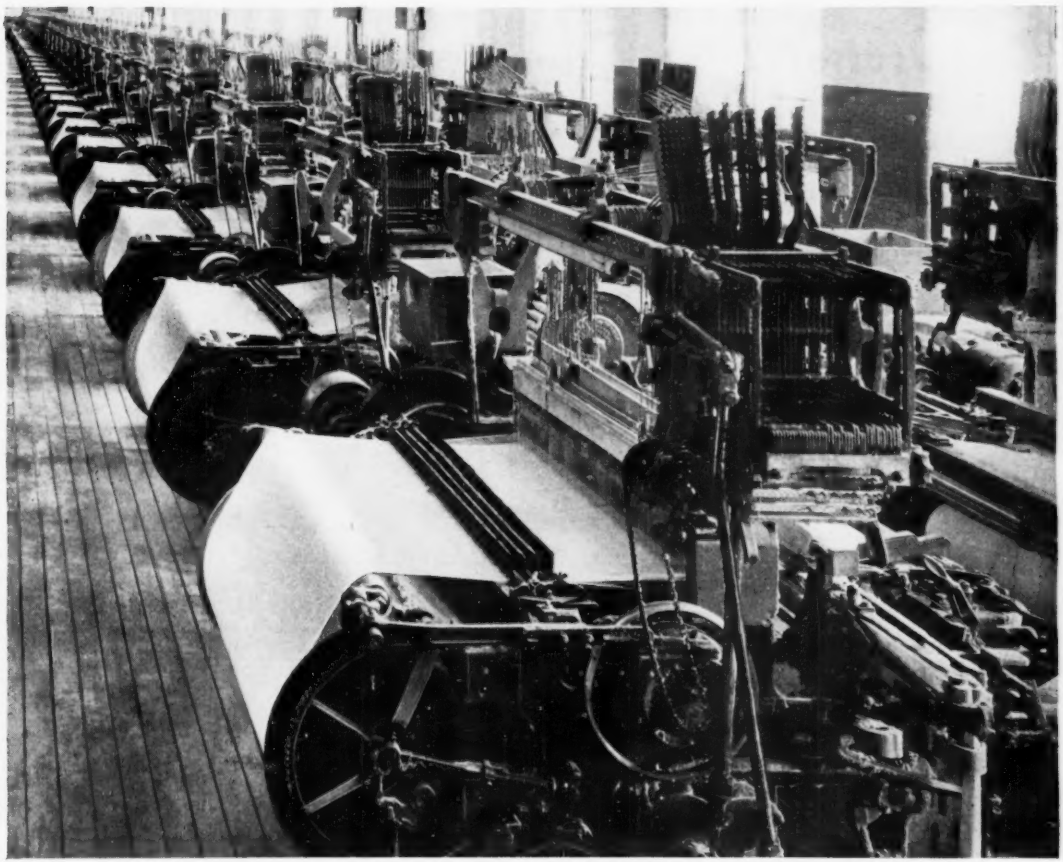
For lubrication counsel, contact your nearest Sinclair Representative or write Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

HERE'S WHY SINCLAIR BEARING GREASE AF IS WIDELY ACCEPTED AS AN EXCELLENT LUBRICANT FOR ANTI-FRICTION BEARINGS:

Because it is highly resistant to oxidation, this great Sinclair product retains its *consistency* and *lubricating quality* under the toughest operating conditions. It is designed to *assure* freedom from leakage and loss due to softening and bleeding and the product spoilage which often results. The correct grade of Sinclair BEARING GREASE AF helps *reduce* starting load and power consumption by cutting friction to a minimum. It also protects against rust and corrosion of bearings.

Yes, all these *important* advantages have been *proved* by performance in many mills. And they can save *you* money. Less frequent applications are required, bearings last longer, and power costs are lowered.

Investigate, too, the advantages of Sinclair LILY WHITE Oils for spindles *and* Sinclair NO DRIP Oils for top rolls. They also have been *proved in use!*



SINCLAIR TEXTILE LUBRICANTS

SAVE WEAR AND REPLACEMENTS

What's corn doing up in the rafters?

Basic research in corn helped put it up there . . . in the form of fibre glass insulation.

Certain types of dextrines are needed to produce the glass fibre. These particular dextrines are developed by research in corn. Corn fills a myriad of industrial needs . . . our continuing basic research in corn serves all American industry . . . serves you.

Corn products in textiles

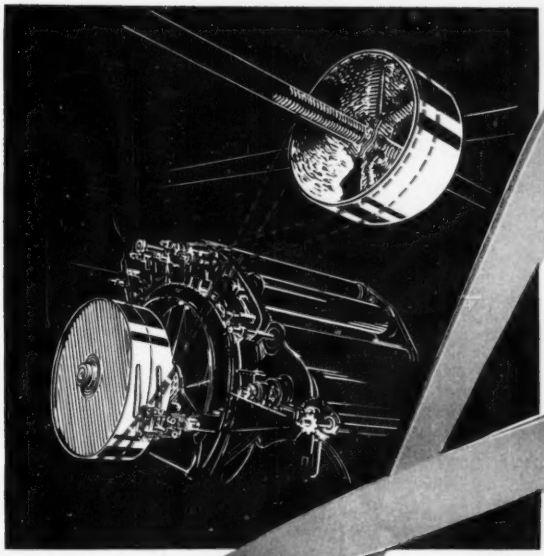
In the textile field starches, gums and dextrines provide superior formula ingredients for many textile processes. New techniques involving the use of corn products are being developed as part of a continuing research program at Corn Products Refining Company.

If you have a production problem why not check with Corn Products. A complete line of corn products for every purpose is available. Technical service is yours . . . no obligation, of course.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.
Manufacturers of

GLOBE® brand dextrines, gums **GLOBE® brand starch** **EAGLE® brand corn starch**

your pulleys will drive your machines only as well as your belts drive your pulleys



Graton & Knight HEART OAK leather belt on main cross shifter drive to wool card.

if you want more production, get GRATON AND KNIGHT leather belting for more production-power

Get a Graton & Knight "Live Traction" Leather Belt — because it is engineered to transmit maximum uniform horsepower at correct speeds and sustained R.P.M. — with ample reserve for load peaks, and "fluid drive action" to absorb starting torque and load shocks.

For tough conditions, cross, shifter and idler drives, **HEART OAK** top grade center stock oak tannage. For short center, small pulley, cone pulley and serpentine *precision* drives, **RESEARCH®** premium quality. For ambient conditions (steam, oil, water, acid and alkali fumes) **SPARTAN®** combination tannage . . . Whatever your conditions, you'll get more production-power with Graton & Knight *Engineered* Leather Belting.

and *keep* your belts pulling for you

Stop belt slippage — prolong belt life with GRAKO® CLEAR Belt Dressing, result of 100 years experience in leather tanning and belt manufacture. Preserves and lubricates the fibres. Pint, quart and gallon cans — 5-gallon and 50-gallon drums. Send for circular.

New Belting Catalog and Manual

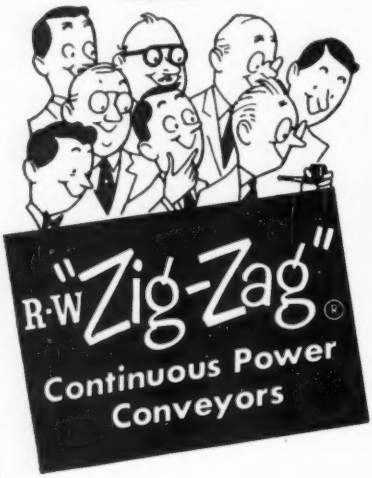
shows how to get more production-power with leather belting. Our representative will deliver your (free) copy upon request.

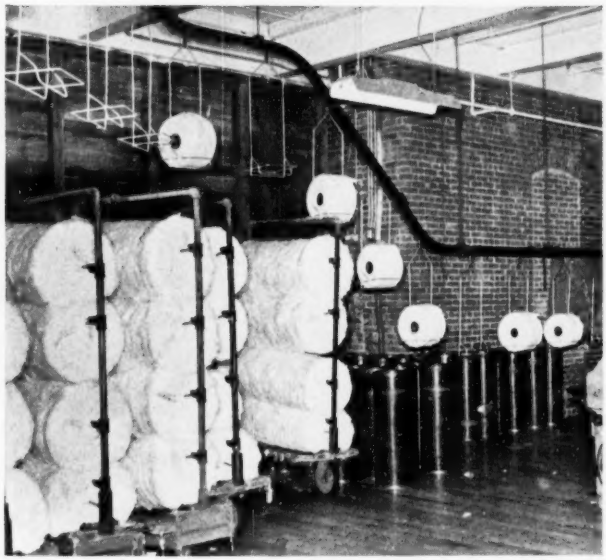
GRATON & KNIGHT COMPANY
356 Franklin St., Worcester 4, Mass.

second centur G and K **engineered leather belting for more production-power**

GRATON AND KNIGHT Estab. 1851

Get over the handling bottleneck

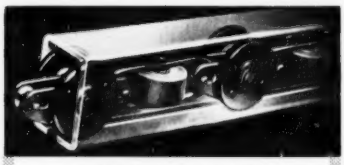




for lower costs...
greater efficiency!

Handling bottlenecks in textile mills mean loss of time and money. But now there's a way to eliminate excess handling completely. The Richards-Wilcox Zig-Zag Continuous Power Conveyor releases valuable workers for other jobs, efficiently solves your handling problems. Zig-Zag utilizes every available inch of extra space. The system may be installed to move over or around existing machinery—there's no conflict with other vital jobs. A proper installation may even release extra space in crowded areas.

Find out how you can save on production costs and increase efficiency with an R-W Zig-Zag Continuous Power Conveyor in your plant. Write our nearest office for a consultation—there's no obligation on your part.



ENGINEERED FOR ECONOMY AND FLEXIBILITY

- Horizontal and vertical units alternate in a continuous chain traveling through special steel tubing.
- SAFE—all moving parts fully enclosed.
- Complete flexibility for installation in any plant. Easily installed, easily changed to conform to plant alterations.
- Low first costs. Lower Power Factor.
- Standard horizontal or vertical curves—two-foot radius.

1880 RICHARDS WILCOX R-W AURORA Reg. U. S. Pat. Off. 1952

OVER 72 YEARS

Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"

AURORA, ILLINOIS, U.S.A. *Branches in all principal cities*

SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT
INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS
ELEVATOR DOOR OPERATING EQUIPMENT

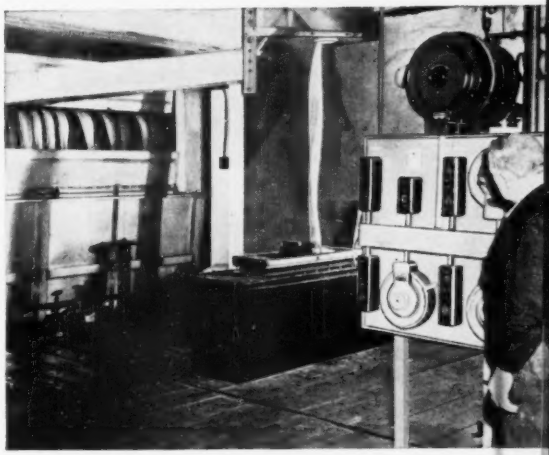
CUTLER-HAMMER

MOTOR CONTROL FOR THE TEXTILE INDUSTRY

You can judge it by the men who specify it

Cutler-Hammer Motor Control is so frequently the specified choice of mills staffed with able technical men that the record is most convincing. These men know Cutler-Hammer dependability is no mere competitive claim. They know it is the earned advantage of the longest and most intensive specialization in motor control engineering. They have seen its proof stand out clearly in Cutler-Hammer Motor Control performance . . . over the entire range of textile control requirements from the simplest starters to the most complex electronic equipment. These men know *both* motor control and textile production needs. Their continued preference for Cutler-Hammer can mean nothing less than continued satisfaction. Judge Cutler-Hammer Motor Control by the men who specify it!

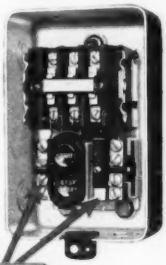
You too will find it pays to insist on Cutler-Hammer Motor Control and refuse all substitutes. An adequate network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. CUTLER-HAMMER, Inc., 1456 St. Paul Avenue, Milwaukee 1, Wisconsin.



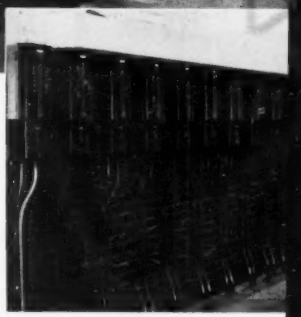
for **PEPPERELL** at Lewiston, Maine, where Cutler-Hammer Control is used at all steps of the continuous peroxide bleaching process.

CUTLER-HAMMER EUTECTIC ELEMENT OVERLOAD PROTECTION

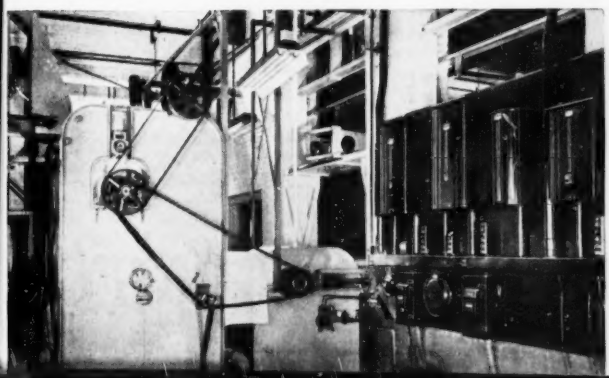
One of the most ingenious and useful inventions of all time, Cutler-Hammer Eutectic Element Overload Protection accurately duplicates, measures and responds to heating effect produced within the motor. The world's most widely used and the world's most dependable motor overload protection, not only permits the motor to work *closer* to capacity in all cases but to do so in perfect safety. A standard feature of Cutler-Hammer Control.



CUTLER-HAMMER
MOTOR CONTROL
C-H



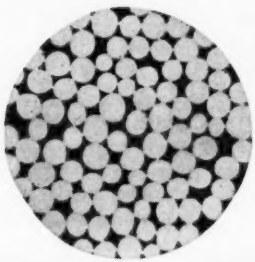
for **EXPOSITION** at Atlanta. Cutler-Hammer Safety Switches and Automatic Starters shown at the right serve the pickers shown above. Cutler-Hammer Control is also used in opening, cleaning, on drawing machines, roving frames . . . on through to the looms in this great mill.



for **CRANSTON** at Webster, Mass. You will find Cutler-Hammer Control on the continuous peroxide bleaching range . . . in fact on all finishing ranges in this plant.

Things you might overlook when changing FIBERS

Cotton



Synthetic

Call your Armstrong man –

Make sure your roll

ARMSTRONG MEN have years of textile experience. They're ready with up-to-the-minute solutions to today's problems. Put their experience to work for you. Call in your Armstrong man . . . *anytime.*

If you were to switch from cotton to one of the new synthetic fibers, you might need to change your roll coverings to get best results. There are a lot of other things, too, that may call for a change in roll covers—a change from flat to revolving clearers, for instance, or vice versa.

It would be hard to find a mill man who doesn't know this. Yet, with the thousand-and-one details of running a mill on your mind, it's surprisingly easy when making an operating change to overlook the possible effect on the roll coverings. Then, when you're ready to run, there's trouble.

That's why so many mill men make a regular practice of talking over any proposed changes with their Armstrong representative BEFORE they make them. (You'd think we were bragging if we told you how many mill men do this!) Actually, when you run on any one of Armstrong's covers, the covers themselves are only half of what you get.

The other half, of course, is the training and ex-

ARMSTRONG'S

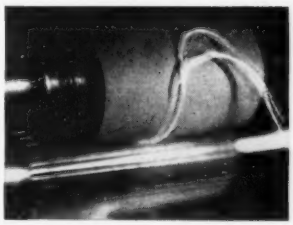
coverings are right for your new stock

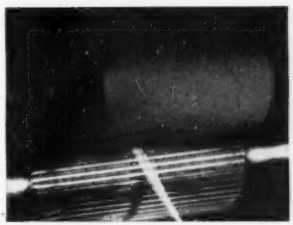
perience of your Armstrong man. Roll coverings and what can happen to them are his whole business. Chances are that he's already met—and solved—any roll covering problem that might confront you. That's why he's a good man to keep you from getting into roll covering difficulties, and equally good to get you out if you're already in.

The thing that helps your Armstrong man solve your roll covering problems is, of course, the wide range of covers in the Armstrong Line. There's cork for where cork is best. There's plain synthetic rubber in compounds of varying amounts of cushion for spots where rubber does the best job. And then there's rubber combined with cork for still other covering needs.

So call your Armstrong man and go over your roll covering problems with him. In most cases, he can be in your mill within 24 hours after you call or write Armstrong Cork Company, Textile Products Department, 3606 Arch Street, Lancaster, Pa. These products are available for export.

THIS COT LAPS: Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, the two moisture layers have the effect of adhering fibers to cot, causing them to lap up.

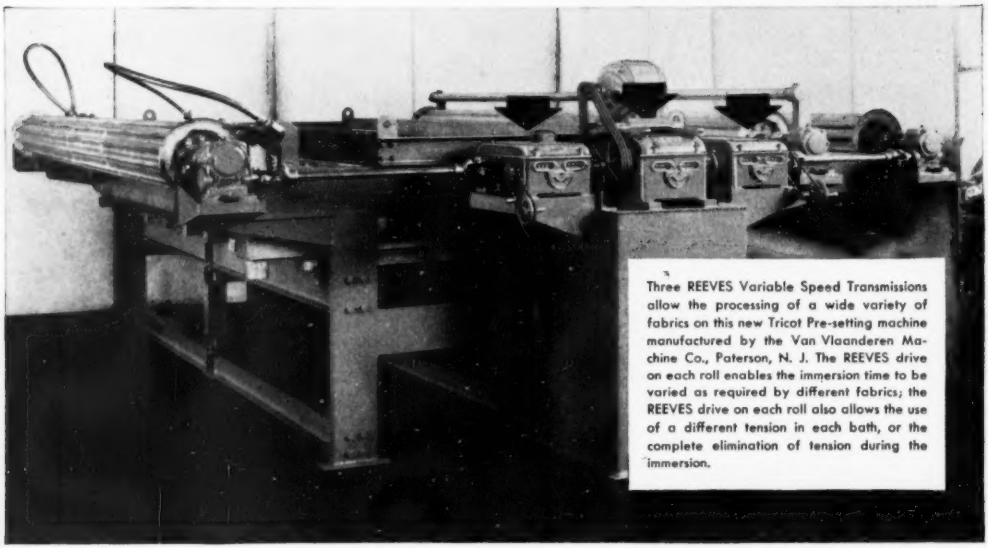




THIS COT RESISTS LAPPING: Certain electrolytes put in patented Accotex® Covers neutralize electric charges in moisture layer on cot. This cancels out the basic attraction of fiber to cot.

ACCOTEX COTS

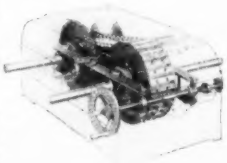
ARMSTRONG COTS are available in a full line of long-lasting, lap-resisting covers. Whether you spin cotton, wool, synthetics, or blends, your Armstrong representative can suggest the right Accotex Cover for your work.



Three REEVES Variable Speed Transmissions allow the processing of a wide variety of fabrics on this new Tricot Pre-setting machine manufactured by the Van Vlaanderen Machine Co., Paterson, N. J. The REEVES drive on each roll enables the immersion time to be varied as required by different fabrics; the REEVES drive on each roll also allows the use of a different tension in each bath, or the complete elimination of tension during the immersion.

REEVES Variable Speed Transmission

Operating Principle



REEVES Variable Speed Transmission embodies the proved operating principle of a V-belt driving between two pairs of cone-shaped discs, mounted on parallel shafts and adjustable to form an infinite number of driving and driven diameters. One shaft receives power at constant speed from motor, line shaft, etc. Other shaft delivers power at infinitely variable speeds to driven machine. Each speed setting is held without fluctuation. Operation is practically noiseless.

REEVES PULLEY COMPANY · COLUMBUS, INDIANA

Recognized leader in the specialized field of speed control engineering

accurate · variable **REEVES** *Speed Control*

The textile industry's most widely used unit for adjusting machine speeds here's why:

1 Incorporates the REEVES operating principle—proved in 300,000 installations—which assures *accurate, positive* delivery of any desired speed within the entire speed range, without stopping the machine.

2 Makes "changeovers" easier—utilizes the machine's *full* capacity—by providing the *right* speed—with the turn of handwheel or touch of button—for every operation and every operator, under every changing condition.

3 Wide choice of vertical and horizontal models—capacities up to 87 hp; in speed ratios as great as 16 to 1; manual, electric, hydraulic or completely automatic controls; suitable for mounting in any position.

4 Easily installed on your machines. Ruggedly constructed with few moving parts subject to wear . . . requires no special tools or training to maintain.

Profit from REEVES Speed Control in your mill—*see immediate results.* Send for full details on REEVES Speed Control—ask for catalog No. T74a-G.

Could you use more efficiency?

If your weave room is air conditioned with an evaporative cooling system, you can step up your efficiency even more. And we think we have just the machine to do it!

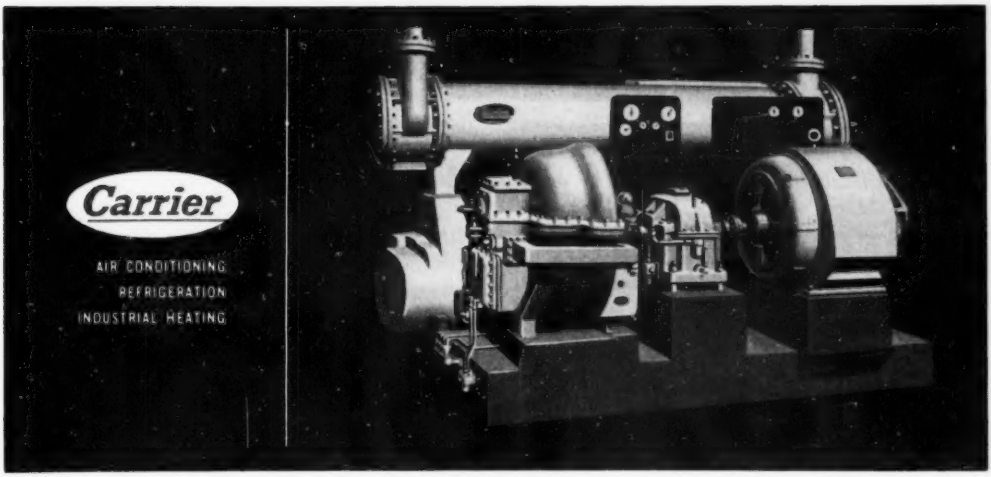
It's a Carrier Centrifugal Refrigerating Machine. It's the machine that supplies refrigeration for air conditioning. So that you have *absolute* control of both temperature and humidity—regardless of outside conditions.

Without positive control of mill conditions, high-speed looms can't perform efficiently. Fluctuations in temperatures cause expansion and contraction of metal parts. Tolerances are violated, causing sheering and smashing, with lots of down-time.

And, of course, modern fibers require the absolute control that modern air conditioning gives. You'll find that air conditioning by refrigeration makes sensitive acetate and viscose yarns easier to handle, with little fuzzing and shredding.

So in the end, weave rooms with modern air conditioning consistently operate with top efficiency.

Your evaporative cooling system can have refrigeration added to it. Write for booklet. Carrier Corporation, Syracuse, N. Y. . . . *for 50 years — the people who know air conditioning best.*



The Carrier Centrifugal Refrigerating Machine. In 30 years, Carrier has built more than anybody else. Each of the existing 2500 machines is backed by the largest national service organization in the industry.

Every Man, Woman and Child in the U.S.A. Can Go Riding at the Same Time

In the U. S. A., competition is basically responsible for better cars at lower comparative cost. We enjoy the use of three times as many cars—and annually produce four times as many cars—as the rest of the world put together. There are approximately 43 million autos—and 9 million trucks and buses—in use in the U. S. A. today. That's more than enough to take everyone riding at the same time.

By stimulating the sale of the new and the resale of the old, our competitive system achieves widespread ownership of automobiles, as with almost everything else. In most foreign countries, out of necessity people make things last as long as possible. In the U. S. A., vigorous competition prompts improvement, refinement and continuous progress. Buyers of new cars get maximum value, because each manufacturer competes actively for the new-car dollar. Lowest-income groups benefit by the lowered prices of used, yet essentially useful, products. Overall result: Steady jobs, good wages and the world's highest standard of living. In most of the rest of the world, luxuries come within reach of only the rich. In the United States, the irresistible drive of competition invents, mass-produces, advertises, distributes and sells—so that most of the miraculous products of modern living are within the reach of all.

Free competition—like freedom of speech, press and religion—is a dynamic part of Uncle Sam's character. Let's keep it free, so that the U. S. A. continues to be the greatest country in the world.

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NUMBER 4 OF A SERIES

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Through Gulf Periodic Consultation Service, Gulf offers a complete lubrication engineering program, supervised by trained specialists.

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They know and completely understand the effect of different operating conditions on lubricants and, just as important, the lubrication requirements of all types of textile mill equipment. And available to them are the facilities of one of the finest petroleum laboratories in the world.

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Please send me, without obligation, a copy of the booklet "Gulf Periodic Consultation Service."

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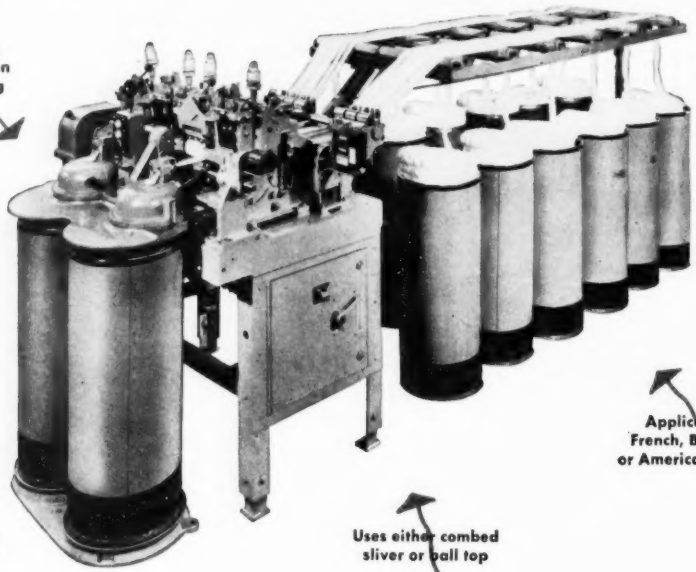
WARNER & SWASEY

Pin Drafter


Produces better, more evenly blended sliver in greater volume
Eliminates costly steps in preparation of sliver for roving
Applicable to French, Bradford, or American systems
Uses either combed sliver or ball top
Reduces waste

Creeling cut in half behind reducer

Another Pin Drafter Profit Story...

UNDER the old system, 64 individual packages weighing 5 pounds each were required before the sliver reached the reducer. Since the adoption of the Warner & Swasey Pin Drafter method, only 32 packages of 20 pounds each are required. The 20 pound packages behind the reducing frame run from 8 to 12 hours before creeling is necessary. This, of course, results in a great deal less handling and helps conserve an already short labor supply.

Operational improvements such as this one are just a part of the increased profits you can expect by installing Pin Drafters in your mill. For complete details on how the Pin Drafter fits into your operations, call in our Field Engineer in your territory.

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TEXTILE MACHINERY DIVISION

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—marvelous-for-daytime colour

For your Fall shades—raisin, for instance—
Sandoz has the dye you need . . .

FOR COTTON OR RAYON COMBINATIONS OF CUPROFIX

CUPROFIX Rubine BL, BLN, or FBL
CUPROFIX Bordeaux BL
CUPROFIX Brown GL
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Aftertreat with Cuprofix or Cuprofix Resin for increased all-around fastness, crease-resistance, fabric stabilization.

FOR ACETATE OR DACRON COMBINATIONS OF ARTISIL

ARTISIL Direct Red B
ARTISIL Direct Blue GFL
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These Sandoz colors combine excellent fastness to light and gas fading with good dyeing properties.

FOR DYED-IN-THE-PIECE, QUALITY WOOLENS, WORSTEDS, WOOL AND NYLON BLENDS COMBINATIONS OF XYLENE

XYLENE Fast Bordeaux P
XYLENE Fast Blue PR
XYLENE Fast Yellow P

You can depend on Sandoz to provide the best colors to meet your specified requirements.

For forecast colors as well as perennial favorites for both natural and synthetic fibers, select from the Sandoz line of chrome, acid, acetate, direct dyes and auxiliary chemicals—detergents, dyeing assistants, finishes.

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disperses dyestuffs and
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for instantaneous and even
wetting from 70° F to 200° F
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New TWITCHELL OIL tested and used continuously in leading mills offers highest quality at low cost.

Another great Emery first . . . a top quality worsted oil that sells at an amazing low price! New Twitchell 7421 has gone through the toughest kind of tests in major mills throughout the country. This continuous mill use has proved *the many unique advantages it offers you:*

Static Control—For integrated worsted operations, or where more than 1.5% oil is applied to "tops," Twitchell 7421 provides the static control required by high-speed processing.

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Emulsion Stability—Emulsions, ranging from 1:9 (oil to water) up to 1:1, remain stable for weeks without any appreciable oil separation . . . Penetration and spreading are excellent.

Resistance to Yellowing and Odor—Repeated tests, both laboratory and plant, show that fabrics treated with Twitchell 7421 do not "heat-up," yellow, or develop odors on aging . . . particularly important for dry-finished fabrics.

Excellent Scourability—An average residual oil content of 0.3% is easily obtained in normal plant scouring, even after prolonged aging. This excellent scourability minimizes soap costs.

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Write for Technical Bulletin ⇩
packed with important and useful information about Emery's new Worsted Oil. Mail coupon now.

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☐ I would like to run a mill trial of new Twitchell 7421 Worsted Oil as soon as possible.

☐ Please send the Technical Bulletin at once.

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Fire in the night! Smoke and flame — fear and confusion conquered through teamwork. It takes teamwork to get results — in fire fighting — in industry.

What can we do to help insure the future of your business? That's what Butterworth engineers have been asking for 131 years — the question has special meaning today.

Thinking of new machines? We will do the utmost to meet your requirements, within the limits of our metal allotments. Making long range plans? Our engineers are at your service. Even now they are teamed with many of America's leading mills, thinking of the years ahead and planning with them to maintain their competitive position.

Butterworth service is offered too, to help your wet finishing department get the most out of what you now have — to keep equipment at peak efficiency. It may be only a spare part you need — but if you need it in a hurry, you'll get it in a hurry if it is humanly possible.

A letter, a wire or a phone call will put a Butterworth engineer on your team.

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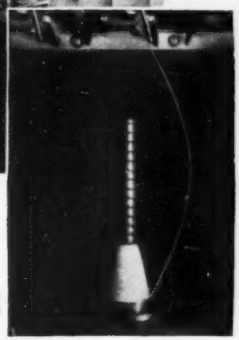
BUTTERWORTH

it's simple TO BOOST SPINNING ROOM EFFICIENCY *with the* **STROBOTAC®**



With the STROBOTAC, *this is exactly what a spindle looks like when it is revolving at any speed from 600 to 100,000 rpm!*

For the maintenance of correct and uniform spindle and traveler speeds the STROBOTAC is ideal. It requires *no* mechanical or electrical connection to the spindle or its shafting. It is simple to use, inexpensive, portable, light weight, very accurate, and can be operated by anyone.

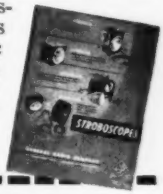
Type 631-B Strobotac $140

Defects such as slack or dirty bands and tapes, spindles that need oiling, crooked idlers, chokes in idlers . . . under spindles . . . on bolster . . . on spindle clutch . . . in bobbins, spindles out of plumb, crooked or worn spindles, crooked bobbins, bad rings, bad or worn travelers, ring rail not level, band and tape out of whorl, thread in whorl, excessive band and tape slippage, split and worn bobbins, bobbins that do not properly fit the spindle, uneven yarn, mixed yarn and oily yarn . . . all of these can be detected simply by anyone with a STROBOTAC.

For the measurement of speed, the STROBOTAC is calibrated to read *directly in rpm* from 600 to 14,400. By indirect methods, speeds up to 100,000 rpm can be measured.

When used as a stroboscope, it is simple to make any rotating or reciprocating machine or part appear to function in s-l-o-w motion . . . even as slow as a fraction of an rpm . . . while the equipment is operating at its normal speed.

Thousands of STROBOTACS are in use daily in textile mills all over the country. Progressive mill officials are enthusiastic over its value in increasing production of frames and in cutting seconds.



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Please send me a copy of "Strobotac Boosts Efficiency in Woolen and Synthetic Mills", "Intelligent Use of Strobotac" and the STROBOTAC BULLETIN.

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Company_____

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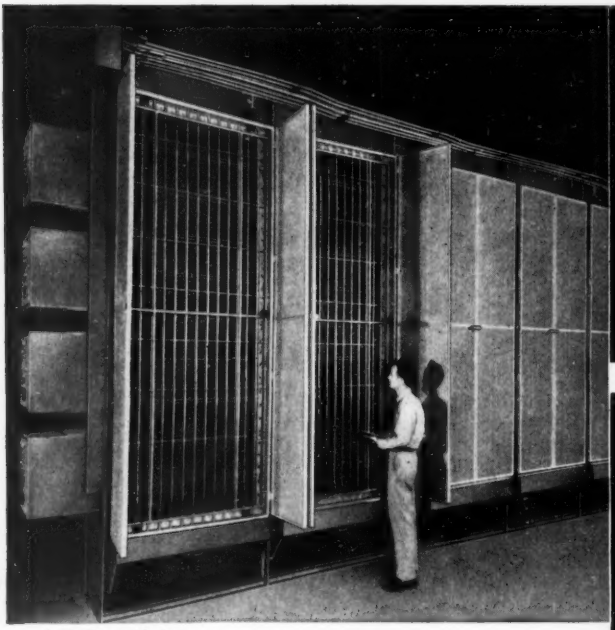
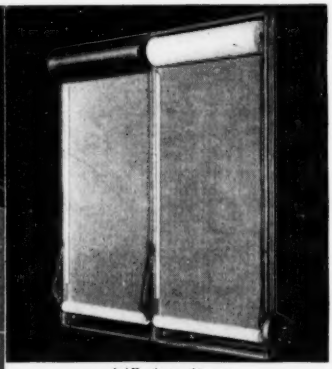
City_____ Zone_____ State_____

clean air costs less than dust!



AAF Electro-Matic



AAF Auto-Airmat

AAF Airmat Lint Arrester

clean air for textile processes...REDUCES OPERATING COSTS!

Specially Designed AAF Filters Improve Quality Control And Cut Maintenance Man-Hours

The best accountant in the business can't tell you the cost of lint and dust in textile manufacturing. But more than 100 mills and textile processors have found that *clean air* supplied by AAF filters is a profitable investment. These filters . . . specially designed for the textile industry . . . reduce rejects, fuel bills and maintenance costs . . . improve product quality control and employee efficiency. The AAF filters shown here have important case histories and are only three of a complete line of air cleaning equipment.

If you want advice on eliminating the cost of lint and dust from your operating statement, call your nearby AAF representative . . . or write to us for complete engineering details.

ELECTRO-MATIC — self-cleaning, electronic precipitator. Highest cleaning efficiency—from smoke to large air-borne material. Used extensively to supply *super-clean* air for thread drying, yarn dyeing and critical processes. Eliminates *shut-downs* and reduces maintenance "man-hours" to a minimum. Bulletin No. 250 F.

AUTO-AIRMAT — the only practical, automatic, self-cleaning lint filter. Widely used for efficiently collecting lint in return air of weaving and spinning rooms. Licks disposal problem, since lint load is contained within rerolled Airmat media. Bulletin No. 234.

AIRMAT LINT ARRESTER — cleans air exhausted from picking and opening machines . . . to allow recirculation. Special design combines compactness and efficiency reducing space normally required for dust basements. Also simplifies installation and maintenance. Bulletin No. 281 B.

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COMPANY, INC.
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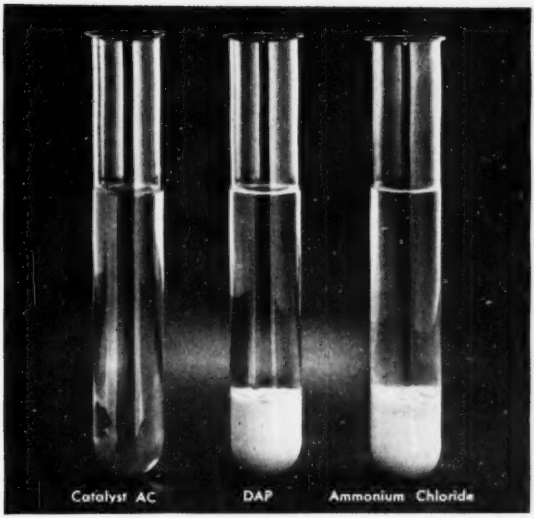
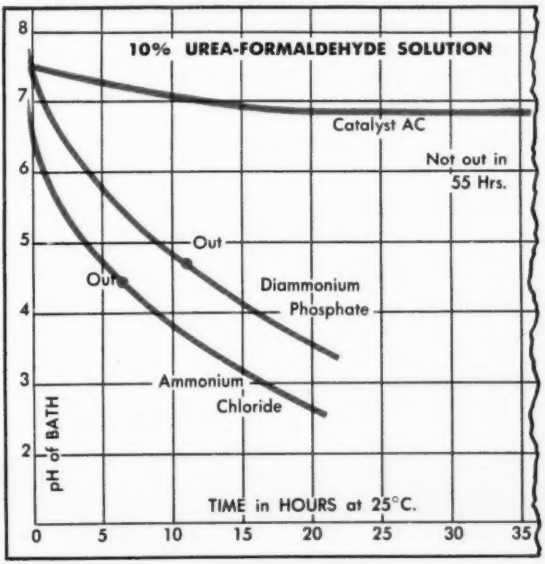


Photograph demonstrates "snowing out" effect of DAP and ammonium chloride shown graphically in chart below. Ten percent solutions of urea-formaldehyde (Monsanto's Santaloom) and these catalysts were allowed to stand at 25°C., as was also a similar solution containing Catalyst AC. In the presence of DAP and ammonium chloride, resin particles settled out after only 10½ and 6½ hours respectively, while sample containing Catalyst AC remained clear and in complete solution for more than two days.

•

Chart shows "pH Change with Time"—10% Urea-Formaldehyde with three resin catalysts at 25°C. In bath catalyzed with ammonium chloride, pH dropped from 7.0 to 4.5 in 6½ hours, at which time resin settled out. In similar experiment with DAP as catalyst, resin particles "snowed out" when pH had dropped to 4.8 after 10½ hours. In bath containing resin and Catalyst AC, pH dropped only slightly below 7.0 and *resin had not begun to settle out after 55 hours.*



LONGER LIFE

FOR YOUR RESIN BATHS

. . . when you use Catalyst AC!

Take just a moment—think what it will mean to your own operations to have your resin baths remain stable and uniform for 24 hours or more—without refrigeration! Then ask your Monsanto representative (or write direct) for the full story on Catalyst AC.

Positive results of laboratory and plant applications over the past three years . . . with both urea and melamine resins . . . have proved that Catalyst AC offers several distinct advantages over other available compounds:

Stable Bath assures uniformity of resin application and retention.

No Refrigeration needed to hold down acidity and lengthen bath life.

Objectionable Odors Minimized . . . since no ammonium salts are present.

Proved Performance in producing desired qualities, such as washfastness and softer hands.

These benefits of Catalyst AC make it the outstanding resin catalyst available today . . . Why not give it a trial in your plant?

Santaloom: Reg. U. S. Pat. Off.

FOR MORE INFORMATION, WRITE
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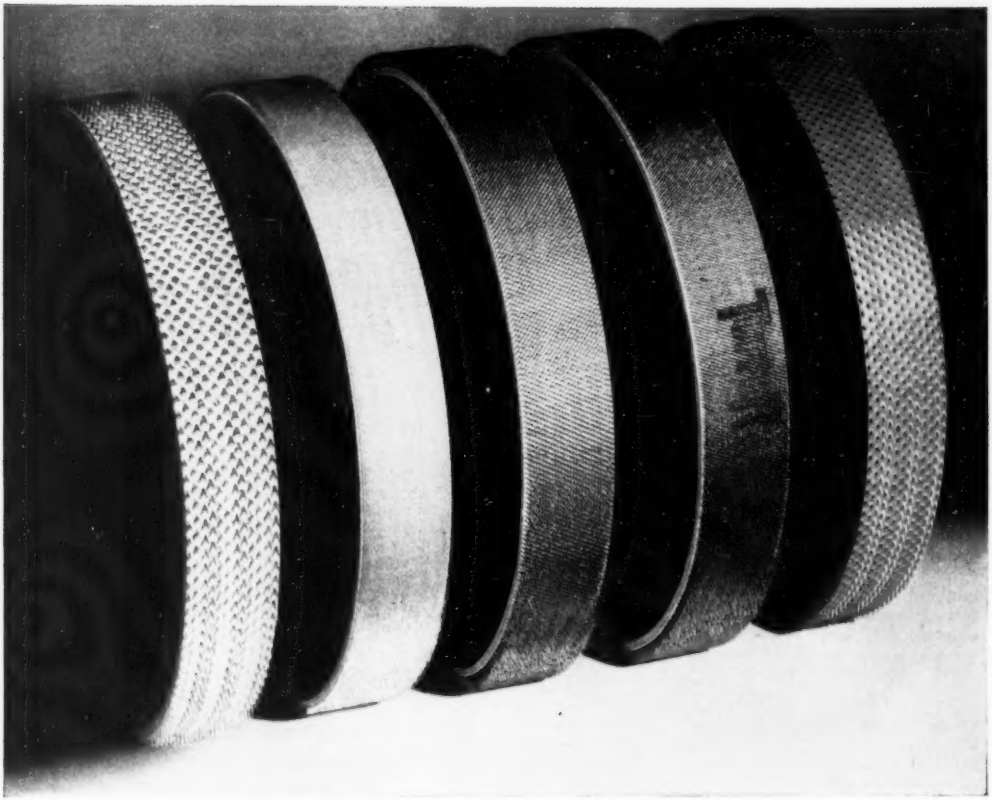
SERVING INDUSTRY . . . WHICH SERVES MANKIND



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You can be sure of getting the Card Clothing best suited to your needs when you ask for a Howard Bros. recommendation. Our factory makes a superior product for every carding operation. Because we are equipped to make all types of Card Clothing from the coarsest size of wire to the finest, we feel well qualified to help you solve any of your carding problems. To be *sure* — specify TUFFER . . . made by our patented Tufferizing process giving you absolute precision and uniformity.

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A-3 *Direct Representation in Canada*

. . . IT PAYS TO SPECIFY TUFFER CARD CLOTHING

A NEW ALL-PURPOSE

ALSIMAG® 192

U. S. PATENT NO. 2,214,703 AND OTHER CLAIMS PENDING

BUTTON GUIDE for UNIVERSAL NO. 50 WINDERS

FEATURES:

Easily threaded • Yarn will not jump out • Low cost
EXACT delivery point • Winds large or small packages
Tapered or straight packages • Extremely long life

Here are several views, approximately actual size, of the new All-Purpose Button Guide. These guides may be ordered from Universal Winding Company, Providence 1, R. I. under Universal No. 73-167-49 for immediate shipment.

The same guides may be ordered from American Lava Corporation, Chattanooga 5, Tennessee under AlSiMag No. GS-25534 for shipment after normal production intervals.

AlSiMag 192 guides of somewhat similar design have been run by many mills continuously for more than five years with no sign of wear.

These guides are now lower in price because of new production methods resulting from large volume selling. These AlSiMag guides are far lower in cost per pound of yarn processed.

TEST SAMPLES FREE ON REQUEST

Let your own experience tell the story.

50TH YEAR OF CERAMIC LEADERSHIP

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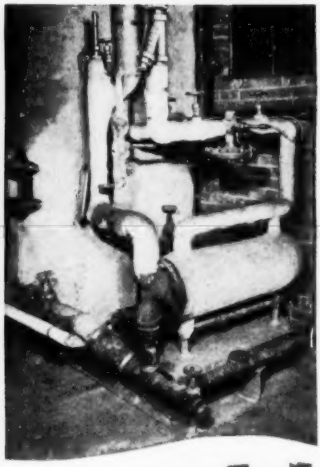
Sarco type TR-30 regulator with needle valve supplies just the right amount of steam to the oil preheater to maintain correct oil temperature at the burner, regardless of load changes or intermittent operation. Efficient burner operation is assured, resulting in a saving in fuel.



Sarco type 24-30 Temperature Regulator is pilot-operated and single seated for tight shut off when no water is drawn. The thermostat in the water discharge from the heater responds instantly to load changes and holds the water temperature constant — Never too hot or too cold.

indispensable

IN ANY POWER HOUSE

In the industrial steam plant of moderate size, elaborate instrumentation usually is out of reach. However, there are two very common applications for which temperature control really is indispensable; namely, fuel oil preheating, and hot water service. Sarco can do the job with inexpensive

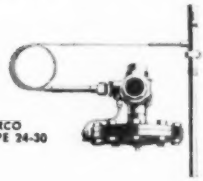
Self-Operated Temperature Regulators

SARCO TYPE TR-30

which will pay for themselves in a few months — often a few weeks.

Thousands of installations, as the examples shown, in every part of the country, testify to Sarco dependability. You set them and forget them. Temperatures are always right.

Sarco can solve your control problem within your budget



SARCO TYPE 24-30

Catalog No. 605 lists 12 different styles for heating, cooling and air conditioning; temperatures 0-300°F; valve sizes ⅜" to 8". Write for your free copy today.

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- **With excellent foaming properties — even at concentrations as low as .04% and under prolonged boiling.**
- **Priced under all comparable materials.**

Give Mapro D Liquid a Trial

Even if it were only just as good as the product you're using — it would save you money. BUT... you'll find that it's a whole lot better!

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In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, Toronto, St. Johns, Que. For Export: Onyx International, Jersey City 2, N. J.

This
Invisible Label
stands back of the Labels
of the
World's Finest Woven Fabrics

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

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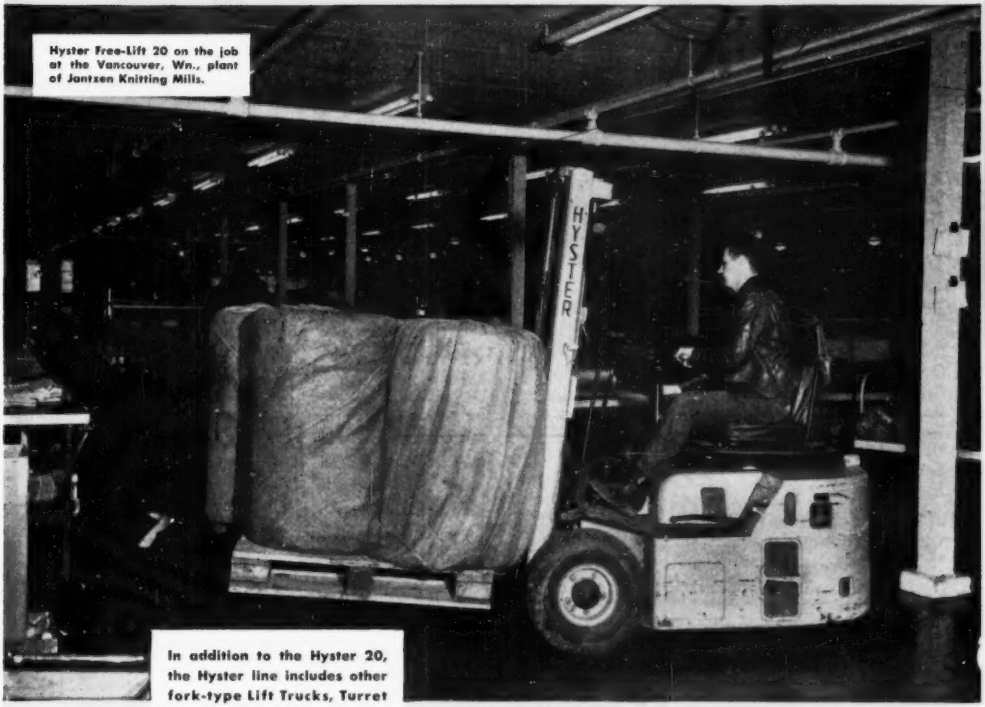
HYSTER® 20

"hustles the loads for TEXTILE PLANTS

The textile industry is full of high speed operations—has to be if profits are made. Hundreds of "hustling" little and sturdy Hyster 20 Lift Trucks are doing "hurry up" jobs for textile men.

This streamlined 1 ton capacity lift truck is fast, stacks high, goes anywhere. Pneumatic tires make it easy on floor surfaces, on the operator, on loads. Works equally well indoors or outdoors, on docks, in box cars. Simple to operate and easy to service.

Ask your Hyster dealer for a demonstration. Write for literature.



Hyster Free-Lift 20 on the job at the Vancouver, Wn., plant of Jantzen Knitting Mills.

In addition to the Hyster 20, the Hyster line includes other fork-type Lift Trucks, Turret Trucks, Karry Krane® and Straddle Truck.® Capacity ranges from 1,000 to 30,000 lbs. Sold and serviced by Hyster dealers all over the world.

HYSTER

HYSTER COMPANY

THREE FACTORIES

2901-57 N. E. CLACKAMAS STREET..PORTLAND 8, OREGON
1803-57 NORTH ADAMS STREET.....PEORIA 1, ILLINOIS
1010-57 MEYERS STREET.....DANVILLE, ILLINOIS

". . . THEN ONE DAY I WATCHED HIM MAKING UP A BATCH OF BRUNSWICK STEW AND I SAW HIS POSSIBILITIES."

SEYCO Products

WARP SIZING
- Softeners
- Binders
- Penetrants
- Ty-In Penetrants
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WET PROCESSING CHEMICALS AND AUXILIARIES
- Dye Assistants
- Penetrants
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- Scouring Agents
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NIAGARA TWIST-SETTER
- Yarn Conditioning Penetrants

We keep our eyes open and our minds working for anything that will give you better results with SEYCO Products. A new assistant—a new way of using it—a new wrinkle in operations.

SEYCO technical men take every opportunity to help *you* get the best results in your work.

HEADQUARTERS FOR TEXTILE CHEMICALS

SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

SEYCO

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •

SAVE 4-WAYS

IN MANUFACTURING NON-WOVEN FABRICS with RANDO-FEEDER and RANDO-WEBBER

SAVE

Capital Expenditure

Only one pair of machines—Rando-Feeder and Rando-Webber—is needed to make a non-oriented web. No carding, garnetting or lapping equipment is required.

SAVE

Mill Space

Very little mill floor space (less than 10′ x 5′) is required. At present only massive machines, not having the versatility of Rando-Feeder and Rando-Webber, are being used.

SAVE

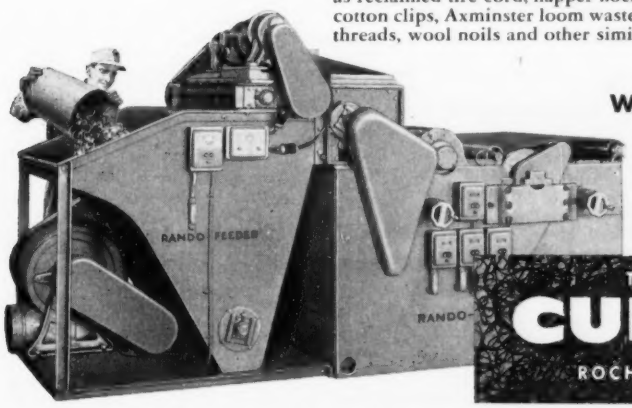
Production Time

The versatile Rando-Feeder and Rando-Webber produce webs of desired thickness . . . from paper thin to 2-inch thickness. Capacities of the machines depend upon the type and condition of materials being processed. The range of the machines is from 35 to over 100 pounds per hour. In addition resins can be introduced while web is being formed by a supplementary feeding device.

SAVE

Waste Fiber (and turn it into profitable products)

The web or mat produced is suitable for further processing into felts, wadding, heavy mats, and non-woven fabrics. To date waste fibers such as reclaimed tire cord, napper flocks, cotton linters, jute waste, garnetted cotton clips, Axminster loom waste, cotton, rayon, nylon mill waste and threads, wool noils and other similar materials have been processed.



WRITE today for more detailed information on how you can have a web made from your own fiber. Curlator Corp., 579 Blossom Road, Rochester 10, N. Y.

TEXTILE DIVISION
CURLATOR
CORPORATION
ROCHESTER 10, NEW YORK

DURA BEAU *Hosiery and Textile Finished fabrics welcome the "eye test"—that crucial moment when milady picks up the product for that close-up look! It's eye-appeal—that sells! That's why the great majority—by far!—of all hosiery is* DURA BEAU *Finished! Dura Beau means hosiery and fabrics made more* DURABLE, *more* BEAUTIFUL!

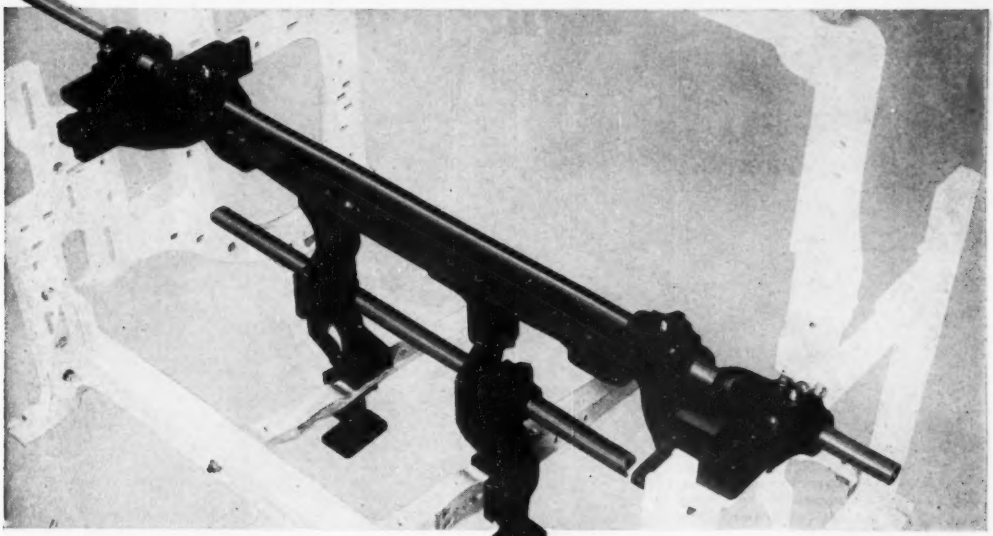
Dura Beau TEXTILE FINISHES

REG. U.S.A. and CANADA

SCHOLLER LABORATORIES and practical field men are at your service everywhere, anytime to help you with your technical finishing problems. Write, wire or phone

SCHOLLER BROS. INC. • Manufacturers of Soaps, Softeners, Sulphonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa. • St. Catharines, Ont., Can.

BAHAN TOP GIRTS



BRACE YOUR LOOMS

for the days of cost-saving ahead!

5 REASONS WHY
BAHAN TOP GIRTS
ARE A WISE BUY:

- Appreciably lowers maintenance costs
- Reduce vibration to a minimum
- Allow faster operating speeds
- Improve quality of cloth
- Hold bearings in positive alignment

Meet increased competition head on with increased efficiency. Costs saved are profits made, and one of the best ways to make old looms produce more goods of a better quality is to install Bahan Top Girts. Thousands of these Top Girts are now in use on Model E, K, X and modified D looms, affording smoother, faster operation than ever before possible. Check the efficiency of your looms now. Compare their production with that of Girt-equipped looms. You can't afford to pass up the cost-saving possibilities Bahan Top Girts have to offer! Get the facts from Bahan today.

BAHAN TEXTILE MACHINERY CO., Inc.

GREENVILLE, SOUTH CAROLINA

Get this SHUTTLE VISE FREE!

LOOMFIXERS will find this shuttle vise comes in handy for removing eye and spring screws from shuttles. Saves time. Saves damage to shuttles. Get yours absolutely free. Fill in coupon and mail today.

BAHAN TEXTILE MACHINERY CO., INC. Dept. I-6
P. O. Box 2325, Greenville, South Carolina
Please send me one of your free Shuttle Vises.

NAME _____

ADDRESS _____

CITY _____ STATE _____

WHERE EMPLOYED _____

HAYES giant NEW section beam

36" HEAD

Hayes 36" Section Beam 54¼" between heads — Weight only 258 lbs. As shown; for Reiner warper. Adapters for Sipp-Eastwood and Cocker Warpers illustrated.

...holds 50% more yarn than 30" beam

PROVEN IN USE

Proof of the cost-cutting job Hayes beams will do is their record of acceptance in little over four years. Today over 50,000 Hayes light metal beams are in the textile industry.

A SIZE TO FIT YOUR NEEDS

You can obtain Hayes aluminum and magnesium section beams in 26", 28", 30", 32" and the new 36" head diameters. The new giant beam carries a huge yarn load — 50% more than 30" beam — for longer uninterrupted runs.

TRICOT AND LOOM BEAMS, TOO

You can also have the profitable advantage of light metal in tricot beams for rayon and nylon fixed or adjustable head loom beams, and in loom beam replacement barrels for use with cast iron heads. All are engineered for cost-saving production, by Hayes.

BRING YOUR BEAMING PROBLEMS TO HAYES

Let the advantages of Hayes beams work for you. Plan now to convert, through normal replacement, to Hayes light metal beams. Hayes field engineers will be pleased to work with you in planning an economical change-over.

NOW FIVE SIZES . . . choose to fit your production needs

CUT COSTS . . . Hayes light metal beams have a cost advantage

- ***They cut shipping and handling costs*** . . . because they weigh one-half or less than conventional beams.
- ***They cut production costs*** . . . because their balanced true running rigid heads and barrels give uniform selvages and permit faster speeds.
- ***They cut reject costs*** . . . because of their rust-free, snag-free polished heads and barrels.

Write for information and the Hayes Catalog No. 100

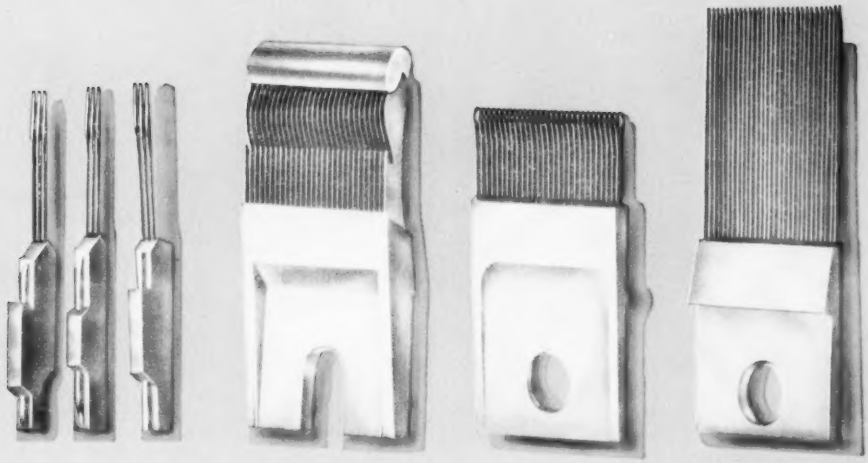
HAYES INDUSTRIES, INC.

HOME OFFICE: Jackson, Michigan

EASTERN REPRESENTATIVE
J. Paul Laird
Philadelphia, Penn.

SOUTHERN REPRESENTATIVE
R. E. L. Holt Jr. & Assoc.
Greensboro, N. C.

For Tricot Knitters . . .



Top Quality
Leaded Needles and Parts
Now Available from Torrington

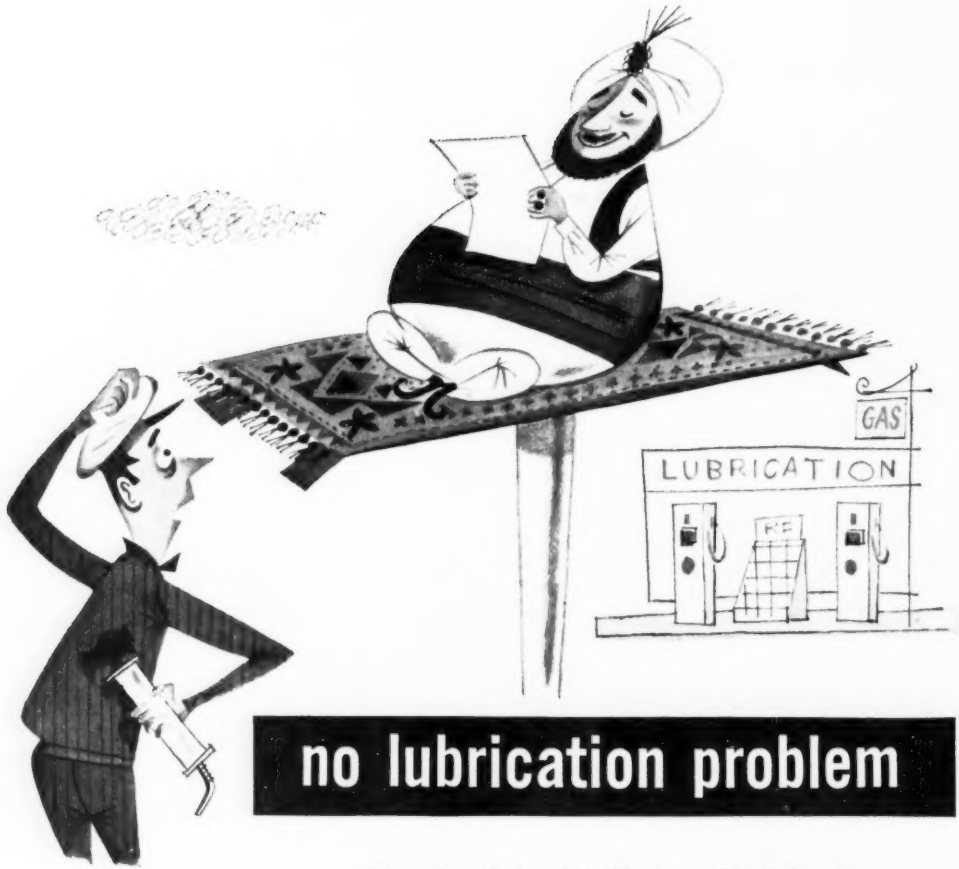
Torrington's recently announced needle-leading service now includes a complete line of leaded needles, sinkers, guides and sley points to meet all demands of Tricot machine users for prompt, dependable service on high-quality leaded units.

Manufacturers of Tricot fabrics may now secure Torrington quality for every phase of their needle requirements. Your nearby Torrington representative will give you full details on how this new service can benefit your mill operation.

The Torrington Company

Torrington, Conn., U.S.A. • Established 1866

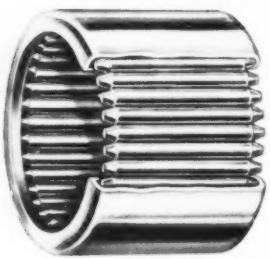
Branches: New York • Philadelphia • Chicago • Boston • Greensboro, N. C. • St. Louis • Bedford, P. Q. • Toronto, Canada
Pacific Coast Representative: E. G. Paules, 1762 W. Vernon Ave., Los Angeles 37, Calif.



no lubrication problem

The unique design of the Torrington Needle Bearing minimizes lubrication problems. The turned-in lips of the outer shell retain a large reservoir of oil and grease. And the full complement of small diameter rollers carries a thin lubricating film to all bearing contact surfaces. In some applications, the original lubricant will last for the life of the product.

Have you considered this and other Needle Bearing advantages—such as high radial load capacity, light weight and compact size—in terms of *your* product? Torrington engineers will welcome the opportunity to give you full details.



THE TORRINGTON COMPANY

Torrington, Conn. South Bend 21, Ind.

District Offices and Distributors in Principal Cities of United States and Canada

TORRINGTON *NEEDLE* BEARINGS

Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

MAKES FINISHES MORE DURABLE...

Crush Resistant, Stabilized, Glazed, Embossed

EVEN
AFTER
REPEATED
WASHINGS
RHONITE R-1
Stable to storage—no refrigeration needed.
Non-volatile—applied and controlled with ease on standard resin finishing machinery.
Completely soluble in cold water—simply add and stir.
Compatible with other commonly used finishes.
RHONITE R-1
—another outstanding textile chemical by the makers of LYKOPON.

Be wise and thrifty. Get full details of unique new RHONITE R-1 textile finish.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

RHONITE, LYKOPON are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.

A RECORD OF SERVICE

in Textile Dyeing and Finishing Plants

as measured by . . .

Number of Engagements	250
Number of Clients	over 100
Complete New Plants	25
Major Additions	20
Reports, Appraisals, Studies and Minor Additions	over 200
Locations: In nearly every state east of the Mississippi, Canada, Mexico and South America.	
Cost of New Plants and Major Additions	over $30,000,000

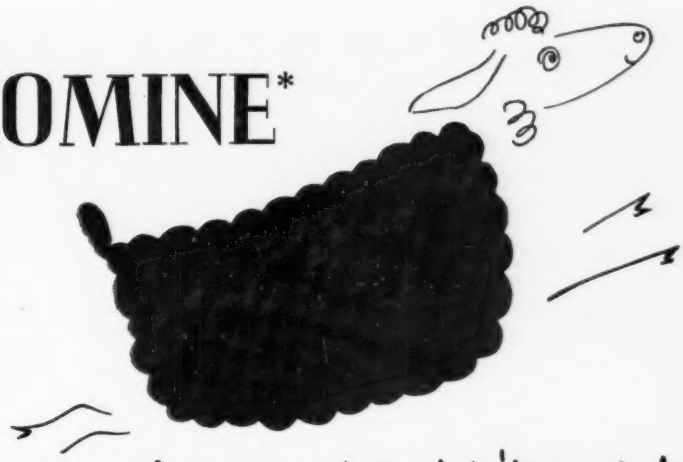
LOCKWOOD GREENE ENGINEERS, INC.

Architects • Engineers

Boston 9, Mass.—40 Central St. • New York 20, N. Y.—10 Rockefeller Plaza • Spartanburg, S. C.—Montgomery Bldg.
215 St. James Street, West, Montreal, Canada: Room 601

1. The Chemstrand Corp., Decatur, Ala.
2. Utica & Mohawk Mills, Mohawk, S. C.
3. Owens-Corning Fiberglas Corp., Anderson, S. C.
4. Julius Kayser Co., Fairview Mills, Fountain Inn, S. C.
5. Union Underwear Co., Campbellsville, Ky.
6. Pequnit Mills
Coosa Pines, Ala.

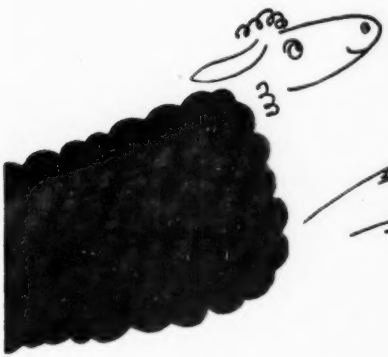
ANTHOMINE



Up go profits! when your woolens go to market and don't come back...

Complaints cost money, whether by converter or consumer! That's why it is profitable to use ANTHOMINE for dyeing wool in any form. You'll get *level shades*, even with "tippy" or blended wool — *increased color yield* — and substantial *reductions in processing time.*

ANTHOMINE has powerful softening properties, leaving the stock, yarn or piece goods with a very desirable hand after dyeing.



Why not PUT ANTHOMINE TO THE TEST? Let us show you how ANTHOMINE can be used to the fullest advantage in your dyehouse. Mail the coupon below.

Arkansas Co. INC.

MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS
NEWARK, NEW JERSEY

*Patented

Arkansas Co., Inc.
P.O. Box 210
Newark, N. J.

Gentlemen:
Please send me, without obligation:

- ☐ Full details of ANTHOMINE'S benefits
- ☐ Application procedure for all wool dyeing processes
- ☐ Representative to arrange for demonstration

NAME _____ TITLE _____

FIRM NAME _____

ADDRESS _____

CITY _____ STATE _____

3-6-2

NEW PACKAGED G-E SLASHER DRIVE WINDS MORE YARN PER BEAM

Automatically-controlled warp tension is maintained on this slasher by a G-E packaged slasher drive (control panel in foreground). Soft spots in the beam are reduced and yarn elasticity kept high.

Compact, flexible drive also cuts yarn breaks at large Eastern mill

A new General Electric packaged slasher drive was recently installed at Mohawk Carpet Mills, Amsterdam, N. Y., to size carpet-backing yarn. In this new drive, G-E adjustable-voltage d-c speed control is combined with G-E amplidyne tension control in a single, simple "package." Already the new drive has proven itself—in more yardage on the beam, fewer ends down at the loom!

COSTS LESS—THREE WAYS!

Low first cost: Mass-produced parts reduce unit price.

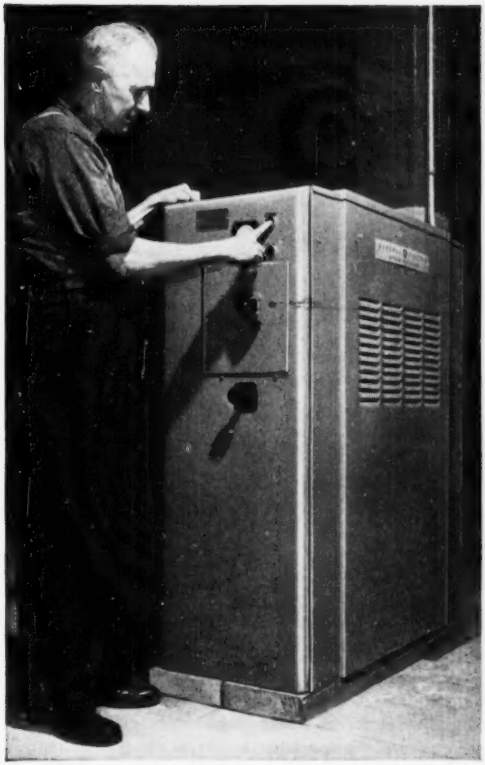
Low maintenance cost: Filters keep lint out of power unit; all parts are easily accessible.

Low installation cost: Just set the power pack in place and run in the conduit—costly interwiring is eliminated, space saved.

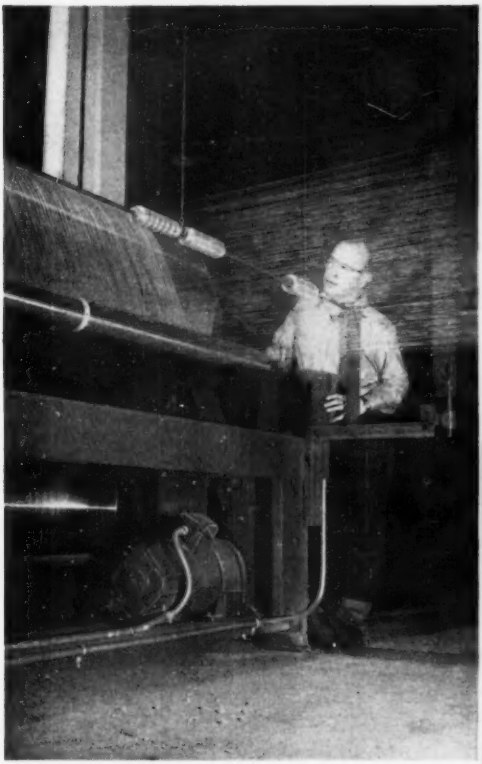
Like to learn more? Call in your G-E Textile Mill specialist. *General Electric Co., Schenectady 5, N. Y.*

PACKAGED SLASHER DRIVES FOR TEXTILE MILLS

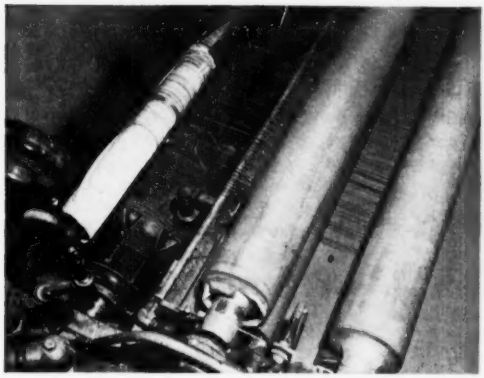
Motor "know-how" for your workers! General Electric's new Motor Selection and Application Course, an easy-to-understand visual program, can help you keep your electric equipment at top efficiency. Shows how motors work, types in use, how to select and apply them. Write for Bulletin GEA-4938-16.



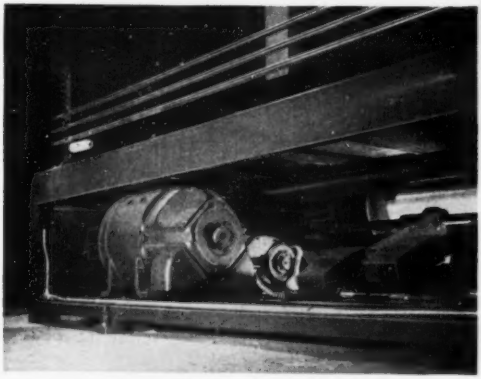
1 **Compact power "package"** contains G-E motor-generator set, amplidyne, booster, exciter, and control panel—needs no special foundation. It supplies d-c power for 4 slasher-drive motors.



2 **Conveniently-located** "Fast-Slow-Stop" push-button station at operator's left is one of several for controlling speed of the entire slasher. Motor shown at bottom is a 3-hp splashproof G-E gear-motor.



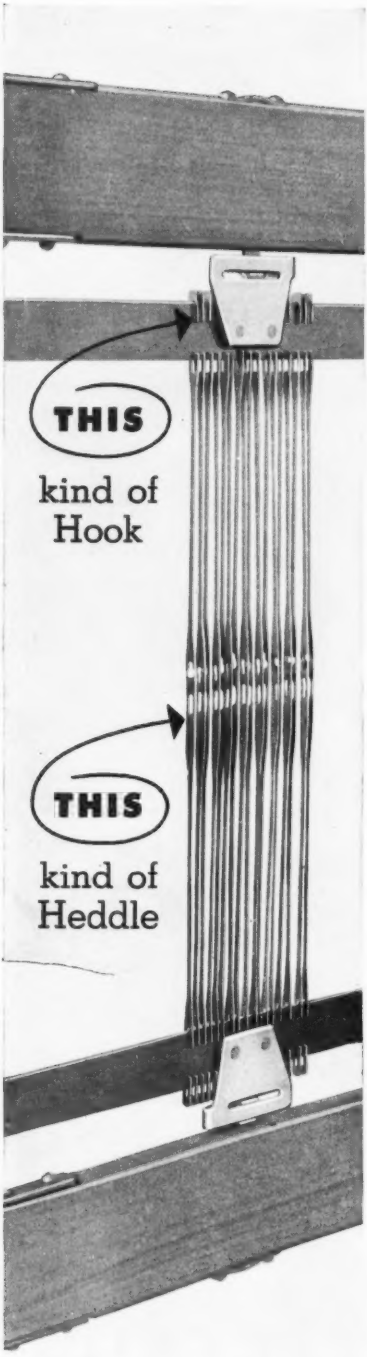
3 **Completely protected** against size, this 3-hp totally-enclosed G-E gear-motor (left of size box) drives size box rolls. Speed can be adjusted to stretch or shrink yarn between size box and dryer cylinders.



4 **Tension stays constant** as beam builds up—7½-hp splashproof G-E gear-motor changes beam roll speed in response to amplidyne. The 5-hp delivery-roll motor, right, permits desired beaming tension.

GENERAL ELECTRIC

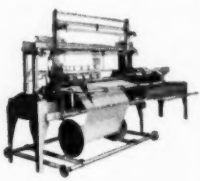
651-23



You can improve your weaving **NOW** and be ready for a Warp Drawing Machine **LATER** if you will gradually re-equip with **FULL-FLOATING** type Harness Frames and key-hole type Heddles...

The Barber-Colman Warp Drawing Machine requires equipping your looms with harness having steel heddles of the type shown here, in order that the selecting mechanism may properly position the correct heddle eye for each drawing-in needle stroke. Also, these harness must have support bar hooks of the type shown, in order that the heddles may move freely the full length of the frame. The machine holds the heddles in a group, setting them off at proper intervals as each is drawn. This full-floating construction *improves weaving immediately* by removing restrictions and permitting each heddle to find its proper in-line position in the frame.

Now, the cost of such harness may amount to more than the cost of the Warp Drawing Machine. This should not discourage consideration of the machine, in view of the advantages of substantial cost savings in warp preparation. Since you are replacing heddles and harness frames frequently and constantly as they wear out — why not start *now* to replace with the type that can be used on a Barber-Colman Warp Drawing Machine? Then, when you are ready for the machine, the problem of special harness will have been solved. For details in connection with such a program, we suggest you consult your Barber-Colman representative.



Automatic Spoolers • Super-Speed Warpers • Warp Tying Machines • Drawing-In Machines

BARBER-COLMAN COMPANY
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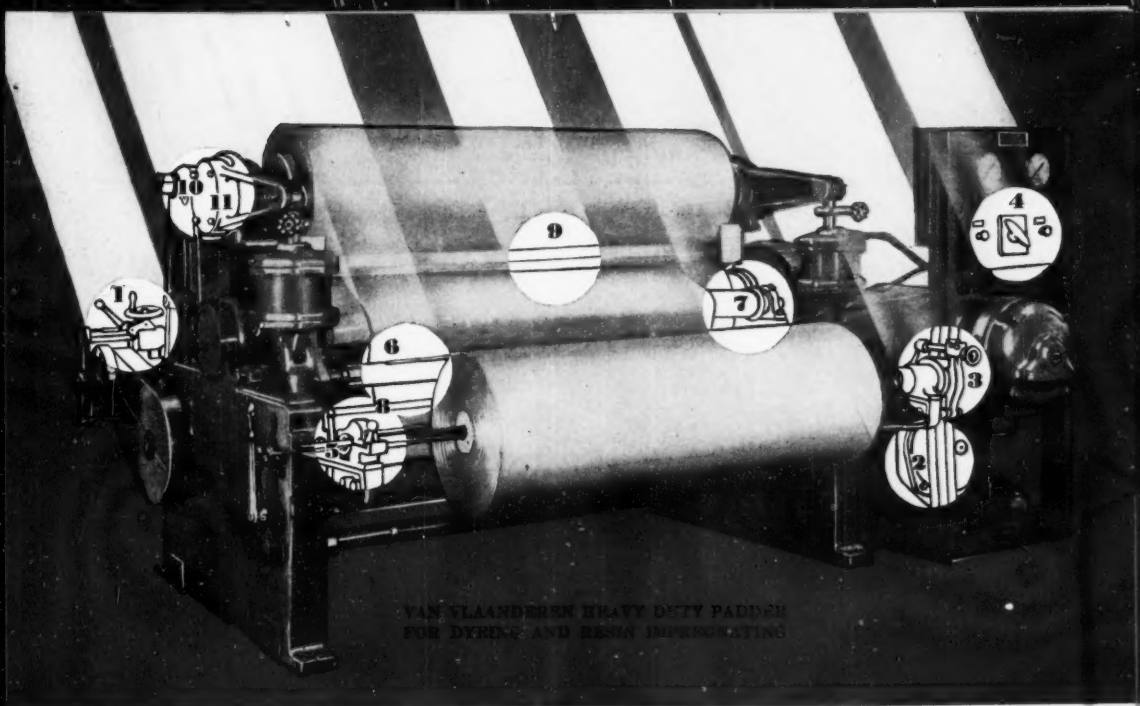
FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A.
MANCHESTER, ENGLAND • MUNICH, GERMANY



VAN VLAANDEREN HEAVY DUTY PADDER
FOR DYEING AND RESIN IMPREGNATING

SPOTLIGHT ON SUPERIORITY

Focus your attention on these points of superiority. They will stand out in the light of your experience in processing modern fabrics.

1. It has an entirely new slip clutch take-up. Operates through dual friction plates with sensitive tension control and quick acting engage and disengage lever.

2. Variable speed drive, coupled to worm gear reducer, gives quiet, smooth operation and saves considerable floor space.

3. Malleable iron block brakes have tension indicator for easy reading and brake shoes are independently mounted for smoother action.

4. Pneumatic pressure system controls each cylinder separately, allowing operator to equalize nip pressure.

5. Both let-off and take-up bars have positive center bar locks.

6. All guide rolls are mounted on anti-friction bearings and made of stainless steel.

7. Two rubber covered expanders with sealed ends are provided.

8. The stainless steel pan can be easily and quickly lowered for cleaning.

9. Splash guards and nip guard assure safe, clean operating conditions.

10. Padder rolls are mounted on spherical roller bearings for smooth trouble-free service.

11. Both rolls are easily removed.

VAN VLAANDEREN

You are invited to see this machine.

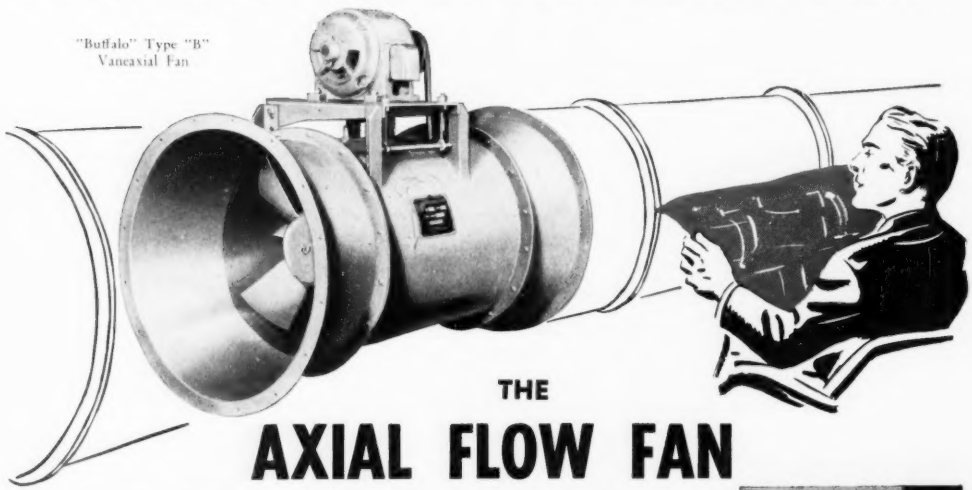
MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey

World's largest manufacturer of machines for processing modern fabrics

"Buffalo" Tips on Getting the Best Service from your Fans

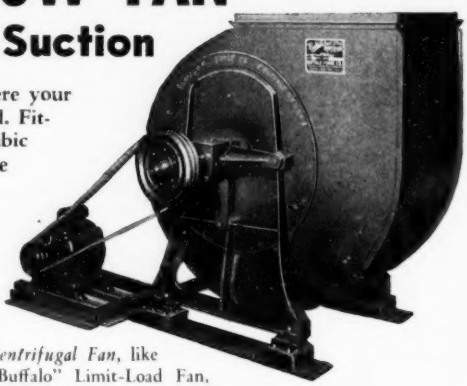
PICK THE FAN TO SUIT THE PLAN!



THE AXIAL FLOW FAN

Forms a Straight Duct Suction

For Ventilating and Air Conditioning Service, where your piping will be straight, this Axial Flow Fan is ideal. Fitting in as a section of pipe, it requires little more cubic space than does the pipe. "Buffalo" Fans like the Type "B" Vaneaxial above, are also relatively light, which reduces installation cost. Also, this type of fan is unusually efficient in these straight duct runs. Another advantage in "Buffalo" Axial Flows is their limit-load characteristic—you cannot overload them, regardless of system pressure.



The Centrifugal Fan, like this "Buffalo" Limit-Load Fan, forms a built-in 90-deg. elbow. If your system is to have many curved connections, consider this type of fan. Details are in Bulletin 3737. Write for your copy.

For Performance Curve and other useful information on "Buffalo" Axial Flow Fans, write today for Engineering Bulletin 3533-C.

"Buffalo" FIRST FOR FANS

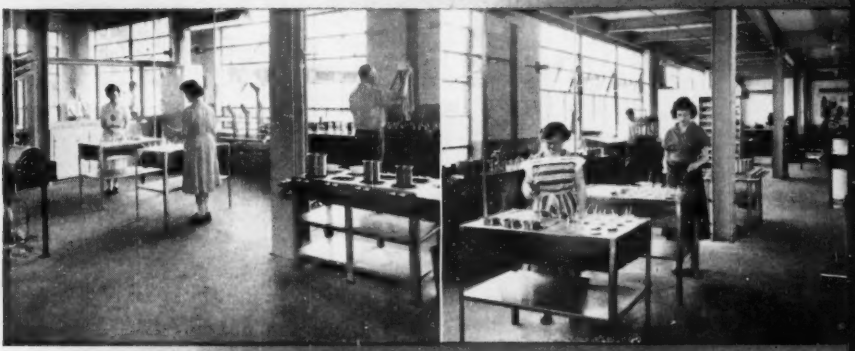
BUFFALO FORGE COMPANY

175 MORTIMER ST. BUFFALO, NEW YORK

PUBLISHERS OF "FAN ENGINEERING" HANDBOOK

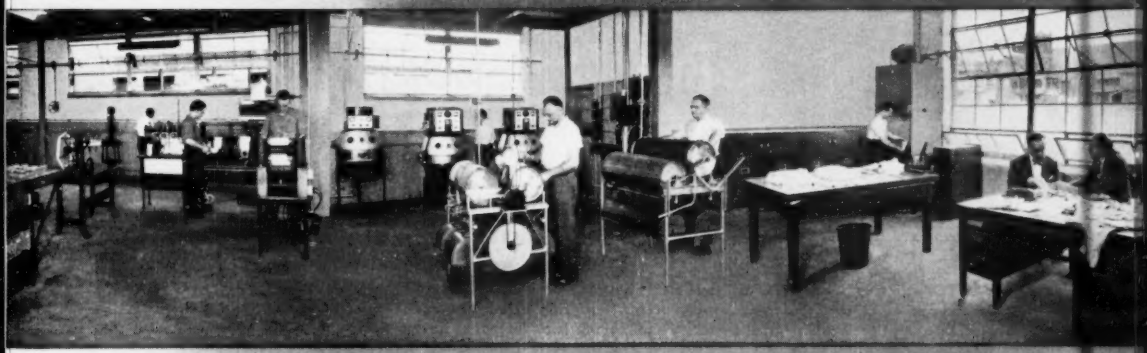
Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Sales Representatives in all Principal Cities

VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING
FORCED DRAFT COOLING HEATING PRESSURE BLOWING



our modern service laboratories

assist you in solving your "dyeing problems"

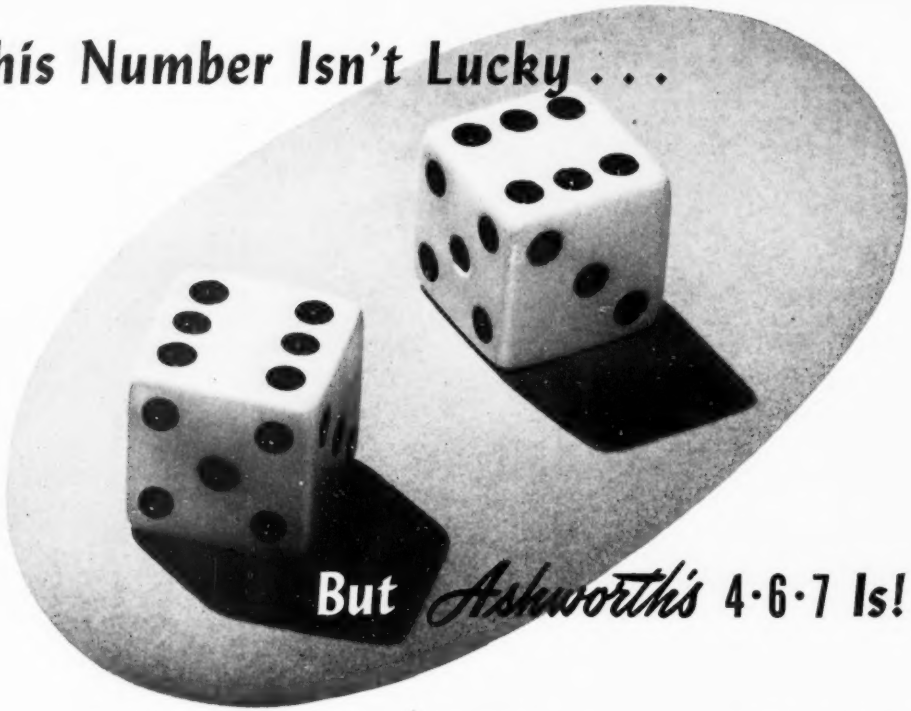


Send us your "dyeing problems." When we apply Althouse *original ideas* to them, together with our more modern methods of manufacture and our exclusive, built-to-order equipment, we'll come up with a practical, workable solution to enable you to use your own dyehouse technique. Make use of this free service. A few of our new, model dyeing laboratory departments are illustrated.

ALTHOUSE
Chemical Company, Inc.
READING, PENNSYLVANIA

pace-setter in precision dye-making

This Number Isn't Lucky . . .



Yes, Ashworth's 4·6·7 is LUCKY, because it Stands for:

4 FACTORIES (Fall River, Worcester, Philadelphia, Greenville) which assure you of an uninterrupted supply of card clothing. Decentralized and strategically located, these factories can "pinch hit" for each other in emergencies.

6 REPAIR SHOPS (Fall River, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which assure convenient, economical and prompt reclothing and repair service.

7 DISTRIBUTING POINTS (Fall River, Worcester, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which make Ashworth products and consultation service more readily available.

AND DON'T FORGET "90". More than 90 years of experience in cards and card clothing — your guide to a consistently high standard of quality in manufacture and efficiency in performance.

Buy Ashworth Card Clothing and be lucky ALWAYS.

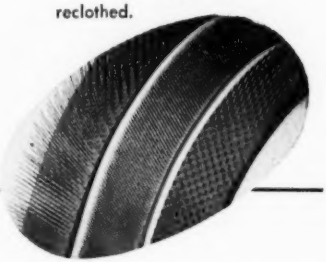
ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

FALL RIVER • WORCESTER • PHILADELPHIA • CHARLOTTE • GREENVILLE
ATLANTA • DALLAS (Textile Supply Co.)

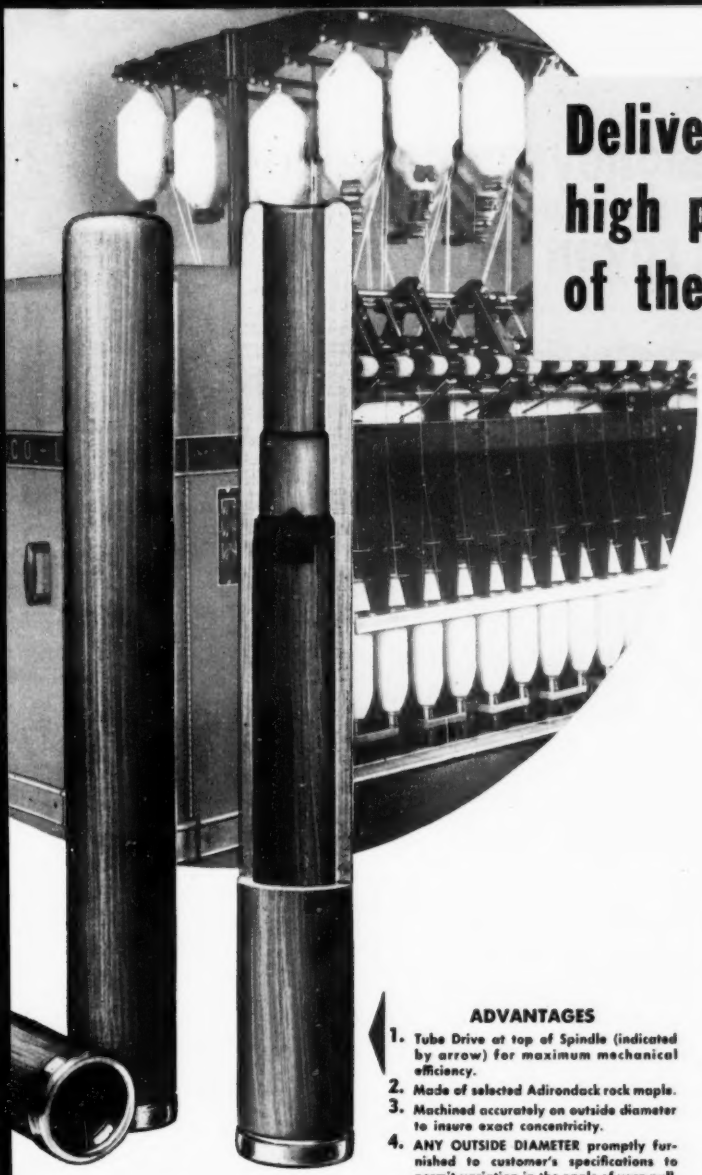
PRODUCTS AND SERVICES

. . . Card Clothing for cotton, wool, worsted, silk, rayon and asbestos cards and for all types of napping machinery. Brusher clothing and card clothing for special purposes. Lickerin wire and garnet wire. Sole distributors for Platt's metallic wire. Lickerins and top flats reclothed.



Ashworth CARD CLOTHING

Delivering all the high productivity of the Gwaltney Frame



U S Wooden Spinning Tubes for use with the patented "New Era" Spindles.

ADVANTAGES

1. Tube Drive at top of Spindle (indicated by arrow) for maximum mechanical efficiency.
2. Made of selected Adirondack rock maple.
3. Machined accurately on outside diameter to insure exact concentricity.
4. ANY OUTSIDE DIAMETER promptly furnished to customer's specifications to permit variation in the angle of yarn pull.
5. Maximum durability. Made to withstand rough handling and all usual methods of conditioning.
6. Heavy gauge brass shields protect base.
7. Long lasting glass-smooth finish.

Wooden Tubes by US

Designed for the SACO-LOWELL GWALTNEY SPINNING FRAME

U S congratulates SACO-LOWELL on its notable new improvement in spinning machinery. A "partner in progress", U S is licensed to manufacture wooden tubes for use on the sleeve type New Era spindles which are standard on the Gwaltney Frame.

Let the 95-year experience of U S Bobbin & Shuttle Co. as yarn carrier specialists work to your advantage when you specify spinning tubes for Saco-Lowell SG-1 frames. Any U S sales representative will give you detailed information.

U S BOBBIN & SHUTTLE CO.

LAWRENCE, MASS. PROVIDENCE, R. I. PHILADELPHIA, PA. GREENVILLE, S. C. CHARLOTTE, N. C. MINNEAPOLIS, MINN.

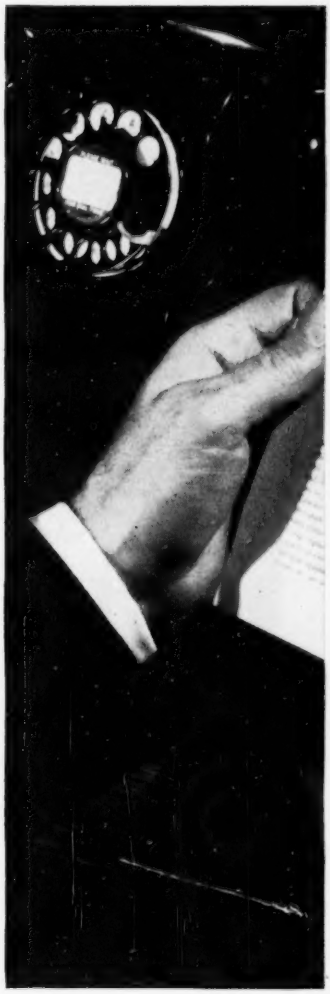
LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave.

DALLAS: O. T. Daniel, Textile Supply Co.

CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

A bookful of moneysaving ideas for cotton and rayon men

Could you use ideas on cutting costs and improving your operations? This new free Westinghouse book is full of them. Here are a few examples.



NO MORE LINT PROBLEMS

You can end lint problems in your motors and controls—right now. Lint blows right through the Westinghouse Lint-Free Motor so it can't cause trouble. And Westinghouse Lint-Tight Starters have special enclosures so that the lint can't get in to create a fire hazard. These motors and controls are available in a complete range of sizes and models to handle any problem in your mill.

IMPROVED SLASHING

This book covers many specially engineered drives. For example, the famous Westinghouse multi-motor slasher drive which provides constant warp tension and results in more uniform beams. There's no jerky clutch operation. This permits higher slasher speeds and reduces maintenance. You save money and get better beams.

BIG WEAVE-ROOM SAVINGS

Installing the new Westinghouse loom motors is one of the biggest improvements a mill can make. These motors need no lubrication so you save all that trouble and expense. They save on power and they drive the looms smoothly because of a precise combination of the right torque and flywheel effect.

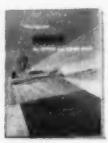
BETTER FINISHING

If you operate a finishing plant you can get much better control of the operations with new Westinghouse drives. On bleaching, dyeing and mercerizing ranges, for example, Westinghouse adjustable voltage drives give you high production with simple operation and excellent flexibility.

CALL WESTINGHOUSE ON YOUR NEXT PROJECT

These are just a few of the savings outlined in this book. Write for your copy right now. And whenever you're planning *any* new mill project, be sure to call your Westinghouse office early.

WRITE FOR B-4799 . . . "Electrical Equipment for Cotton & Rayon Mills". Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-94915



YOU CAN BE SURE . . . IF IT'S

Westinghouse

EQUIPMENT FOR TEXTILE PRODUCTION

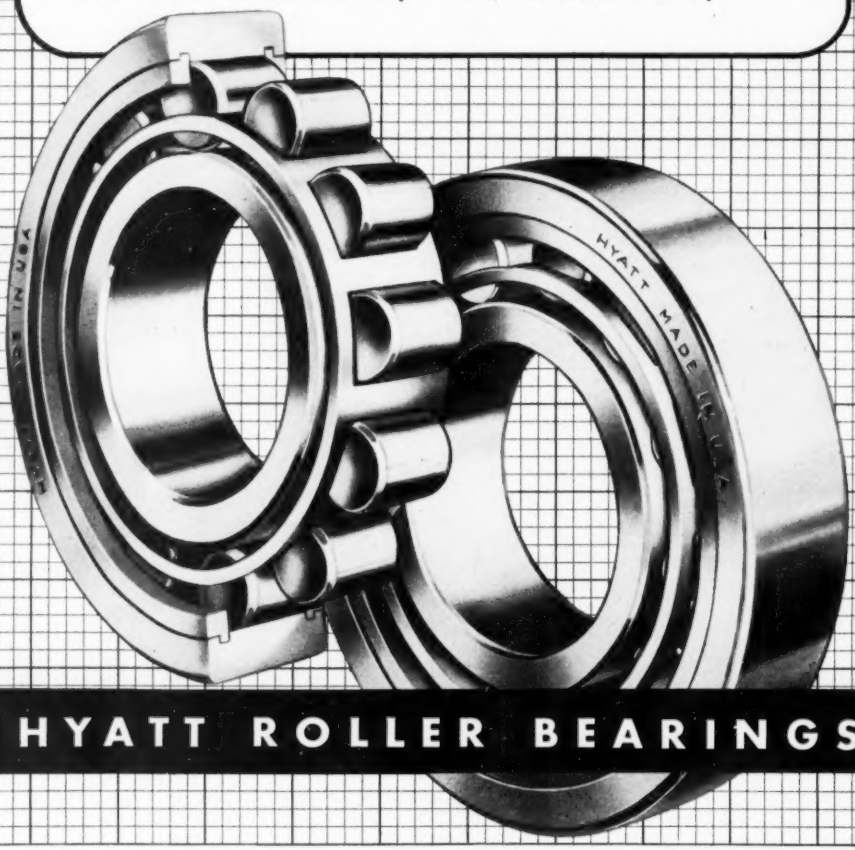
They did what you can do to reduce costs

Specify "HYATT EQUIPPED" When You Order Looms

When you decide to make a substantial investment in new looms, it will pay you to make sure the specifications call for Hyatt Roller Bearings at vital positions—crank, cam, and rocker shafts, vibrating whip rolls, take-up rolls, yarn beam and pick shafts.

Hyatt Roller Bearings require less lubrication. Bearings are so sealed that cloth is kept cleaner. More efficient production is assured. Power is saved. Accuracy of bobbin or shuttle transfer is maintained. Less maintenance cost, as there is practically no bearing wear with Hyatts.

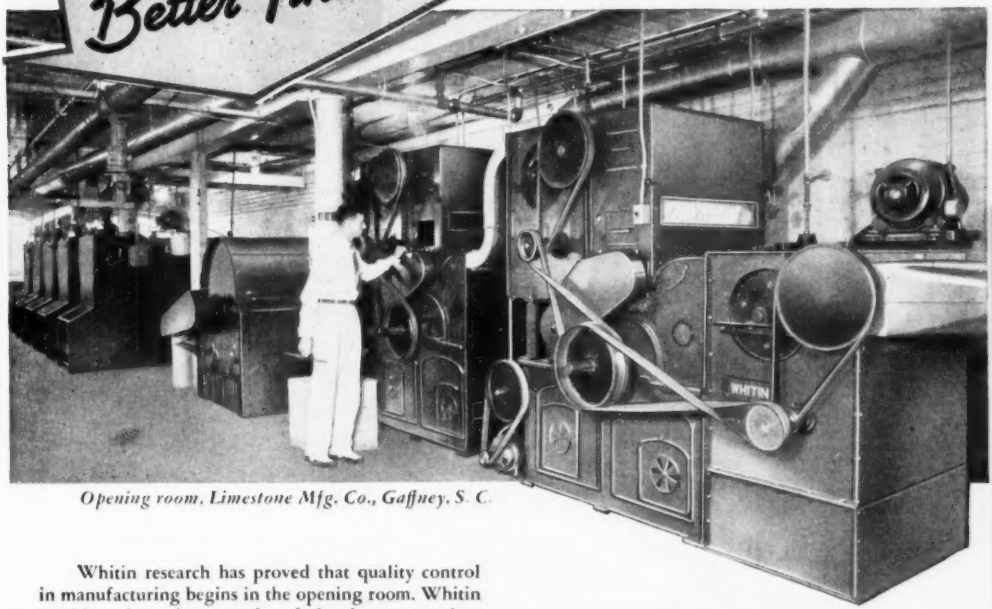
Not only in looms, but in all types of preparatory and finishing machinery, Hyatt applications have, for many years, proved to be good insurance on equipment investment. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.



HYATT ROLLER BEARINGS

A *Good Start* insures a *Better Finish*

Quality starts with WHITIN Opening Machinery



Opening room, Limestone Mfg. Co., Gaffney, S. C.

Whitin research has proved that quality control in manufacturing begins in the opening room. Whitin machines have been perfected for better opening, blending and cleaning. You can cut processing costs and improve product quality by installing modern Whitin opening equipment.

BLENDING FEEDERS

With two or more Whitin Blending Feeders, a large number of bales can be used for making a more thorough, more accurate blend or mix of well opened stock. The machine is simple to operate, easy to adjust and maintain. Capacity up to 200 lbs. per hour.

MIXING FEED TABLE

A uniform sandwich stock mix, automatically controlled, is made on the Mixing Feed Table. A floor type conveyor, it delivers the stock from a battery of Blending Feeders to a Cleaner, Overhead Condenser, or Picker as required. Available in any desired length.

SPIRAWHIRL BUCKLEY CLEANER

The Spirawhirl is an indispensable machine for opening and cleaning all types of cotton without damage to the fibers. The amount and character of the waste removed by the eight adjustable grid bar sections is easily controlled. Recommended production is up to 1000 lbs. per hour.

DOWNSTROKE BUCKLEY CLEANER

Generally used to follow the Spirawhirl, the 24" Downstroke Buckley Cleaner loosens and extracts large motes, leaf and dirt without breaking the waste into small particles. Recommended production up to 1000 lbs. per hour.

FLEXIBILITY OF UNITS

These machines together with Cage Sections and Overhead Condensers, can be flexibly arranged to make any arrangement of the opening line required by the type of stock processed or the physical layout of the plant.

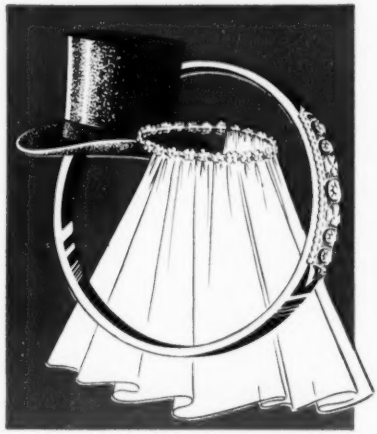
For more detailed information, consult your nearest Whitin representative, or write to the Advertising Dept., Whitinsville, Mass. for descriptive catalogs.

Whitin MACHINE WORKS

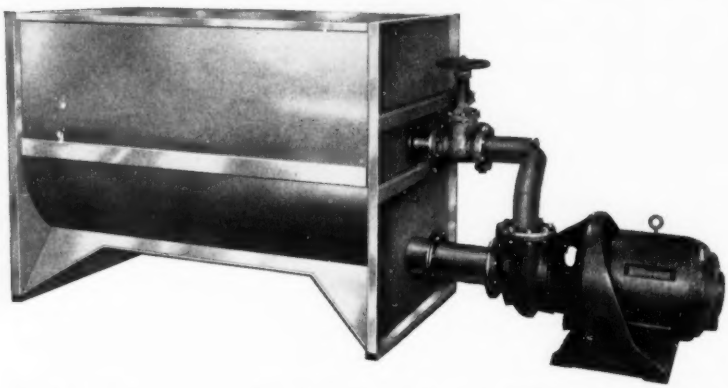
WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

The Perfect Marriage . . .



TRICOT and
BURLINGTON'S NEW PRESSURE BLEACH, BOIL-OFF AND DYE MACHINE



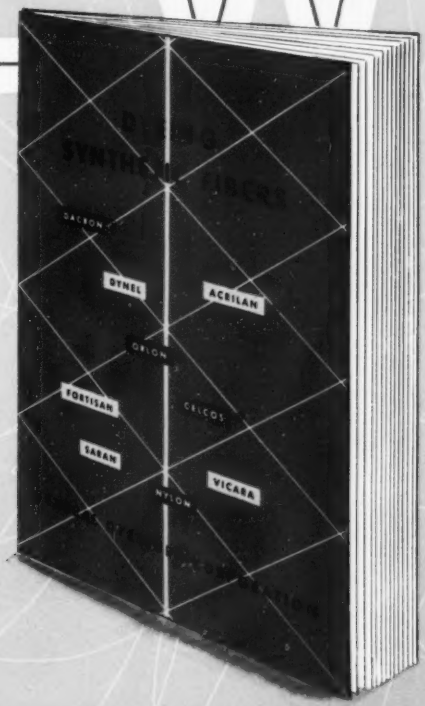
The Glamour Fabric and the Magic Machine!

At last tricot has found its perfect mate, Burlington's new pressure bleach, boil-off and dye machine! Here is a machine that will efficiently and thoroughly clean, boil, wash, bleach and dye all types of tricot at a great reduction in cost. It will speed up your production to a rate heretofore unknown in the handling of tricot.

Capacity 4,000 yards or more at one operation. This machine circulates solution through material at a constant rate. All temperatures and pressure remain under control at all times, giving full protection to cloth being processed. Although this is a new machine, it has been tried and tested and is now being installed in several leading dye plants.

Burlington ENGINEERING COMPANY, INC.
TELEPHONE 6-4478 BURLINGTON, N. C. **GRAHAM, N.C.**

NEW



a revised Edition of

DYEING SYNTHETIC FIBERS

This is our original brochure *Dyeing Synthetic Fibers* brought up to date. The text includes new data and techniques developed since the last publication.

So much work is in progress on the dyeing of the new synthetic fibers that a report of the latest developments is valuable and timely. This brochure contains G.D.C.'s up-to-the-minute recommendations.

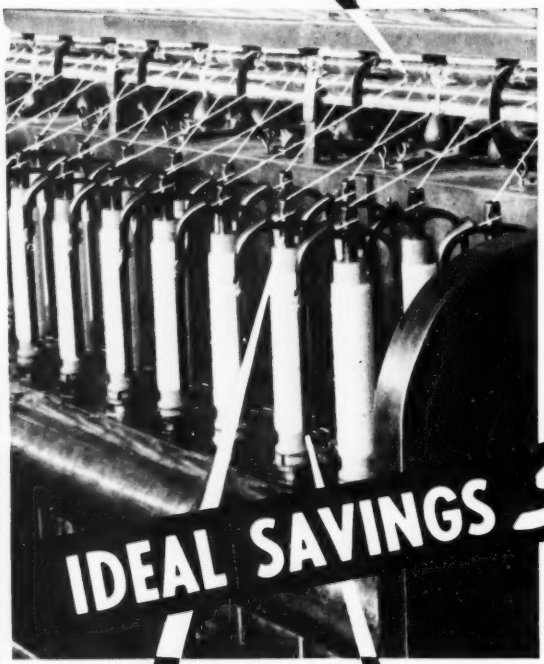
You can obtain your copy from our nearest sales office.

GENERAL DYESTUFF CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

FLOW STEEL RECONDITIONED TOP ROLLS



IDEAL SAVINGS *Stand Out!*

SELECTO-SPEED BALANCING AND RCK FINISH FOR FLYERS

RCK PRESSERS

Write us for your copy of the booklet "Facts About Your Flyers and Spindles."

. . . IN THE NATION'S LEADING TEXTILE MILLS

SELECTO-SPEED FLYER BALANCING

. . . strikes a death blow at the wear and expense caused by vibrating flyers. Flyers Selecto-Speed Balanced by Ideal at the exact running speed specified by your mill, operate super-smoothly. By having *every* flyer balanced at the speed of the frame, you prolong the life of numerous vital roving frame parts . . . and increase yarn production and quality.

RCK FLYER FINISH

. . . Ideal's glossy, black RCK flyer finish gives mill men three important savings: (1) enduring rust resistance, with no peeling or scaling; (2) reduction of employee fatigue, afforded by the eye-saving contrast of black flyer against white roving; (3) extra flyer rigidity, to resist "flyer collision" at high speeds.

FLOW-STEEL RECONDITIONED TOP ROLLS

. . . keep oil in your top rolls and *off* your yarn. The oil-retaining metal built into bearing spots by Ideal's Flow-Steel method eliminates the necessity of daily or weekly oilings . . . saves labor, saves oil, saves parts. Seconds due to oil spotting are nil. Wear resistance is also greatly increased by the cushioning action of Flow-Steel metal against cast iron at bearing spots.

RCK PRESSERS

. . . top quality, guaranteed pressers at a money-saving price . . . manufactured and tested for perfect balance and scientific weight distribution, to maintain proper tautness and overcome the tendency to "fling out" or "rough up" roving. Available in Ideal's famous rust-resistant RCK Black finish. Mills often save money, too, on Ideal's quick delivery.

IDEAL MACHINE SHOPS, INC.

Phones 4161 and 4391 BESSEMER CITY, NORTH CAROLINA

28TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

Textile Industries
Vol. 116 ● June, 1952

News in Brief

Textile Position Improved. The positive forces of recovery are now evident, according to the American Cotton Manufacturers Institute, Inc., in May. Although low prices and hesitant buying still linger, the ACMI points out that there has been a pronounced recovery in retail sales of cotton products, which are running well ahead of last year, and that surplus retail inventories have been liquidated.

To Control Hosiery Production. Samuel F. Rubin, chairman of the board of the NAHM, recently stated that 100 per cent, or even 80 per cent, unionization of the hosiery industry would rebound to the advantage of the manufacturer by affording a legal means to control production. Mr. Rubin indicated the only way it could be done was through strong union contracts which would make it unprofitable to run "extra shift" schedules which tend to glut the market. Mr. Rubin's remarks were not well taken by other hosiery manufacturers in various sections of the country.

New Cotton Card Developed. A new cotton card has been developed by Fratelli Bettoni of Bergamo, Italy, according to a report from Herbert L. Werner of Werner Textile Consultants. Lap feeding and sliver delivery are both in front of the card. This constitutes a novel approach to card design never attempted before and should tend to facilitate supervision of the cards, Mr. Werner said. There are 244 flats practically all around the card, which has no grip bars. The flat strips are taken off in the back and delivered into

Townspeople Turn Tables on Russell— Give 50th Anniversary Party

The townspeople of Alexander City, Ala., turned the tables on Russell Manufacturing Company by giving it the biggest birthday party it ever had — in celebration of the company's 50th Anniversary.

Originating with the business men of the town, it was a tribute to the company and its 2,500 employees who represent approximately one-third of the total labor force in the 384 employing establishments in the Alexander City labor market. Further, it was recognition of the constructive impact that Russell has had upon the section of Alabama.

The tables were turned because previously Russell had done nice things for the community, such as contributions to the modern hospital, schools, and churches.

The Russell organization was founded by Benjamin Russell in 1902. Photos show (inset) original edifice of the company, and a portion of the plants.

New Pickers for Old

Your old pickers can be rebuilt exactly like new machines. The basic design of a picker has not changed in more than 50 years, and therefore a thoroughly modern picker can be built right into the old frames at a big saving in cost. The old frames are valuable, and are just as good as new ones.

Where it is not feasible to send your pickers to us for rebuilding, we will exchange them for rebuilt pickers of the same model. Our truck delivers a new picker at your plant and takes away an old one. The new picker can be making laps the day after it is delivered.

Where pickers do not need complete rebuilding, but should have a thorough overhauling, this work can be done right in your picker room with one of our skilled machinery erectors in charge of the work.

We keep a large stock of picker repair parts always on hand, and fill repair orders within 24 hours after their receipt. In an emergency, telephone us in the morning and you can have the picker repair parts at the mill the following day, if you are within about 500 miles of Greenwood.

AldricH MachinE WorkS
Greenwood, South Carolina

"International Cooperation"

Claudio Vieira de Carvalho (left) of Rio de Janeiro, Brazil, has been selected as the first recipient of the "Euvaldo Lodi Scholarship" in the School of Textiles at North Carolina State College.

Claudio, who will receive $1750 annually for two years, was named as the winner of the scholarship award following his selection as the top student in the Technical School of the Chemical and Textile Industries in Rio de Janeiro. Upon completion of his studies at the college, Claudio will return to Brazil and will teach in the Technical School.

Dean Malcolm Campbell (right) of N. C. State hailed the new scholarship program as "a valuable gesture of international cooperation." Funds for establishment of the scholarship were contributed by Saco-Lowell Shops, Whitin Machine Works, Draper Corporation, and Crompton & Knowles Loom Works.

the box through a pneumatic system—another new feature. A number of stop motions and signals are also provided.

Mill Man Enters Political Race. Luther H. Hodges, well known in the textile industry as a former vice-president of Marshall Field & Co., and general manager of the manufacturing division, has announced his candidacy for Lieutenant Governor of North Carolina.

Wool and Synthetics Compete. Falling wool prices during the past year may result in synthetic fabrics losing significant ground gained in competition with wool for use in suitings, outerwear, sportswear, and hosiery, according to Sidney Tager, vice-president of Associated Spinners, Inc.

Cotton Rugs Big Business. In a special report, the National Cotton Council stated, "The wholesale dollar volume of cotton rug production reached approximately $125,000,000 in 1951, according to calculations based on private estimates of the average wholesale prices of different types of constructions of cotton rugs and mats."

Rayon Shipments. Domestic shipments of rayon yarn and fiber during the first quarter of 1952 amounted to 247,500,000 pounds, a decrease of 22 per cent from the 317,600,000 pounds shipped in the first quarter of 1951.

News in Brief

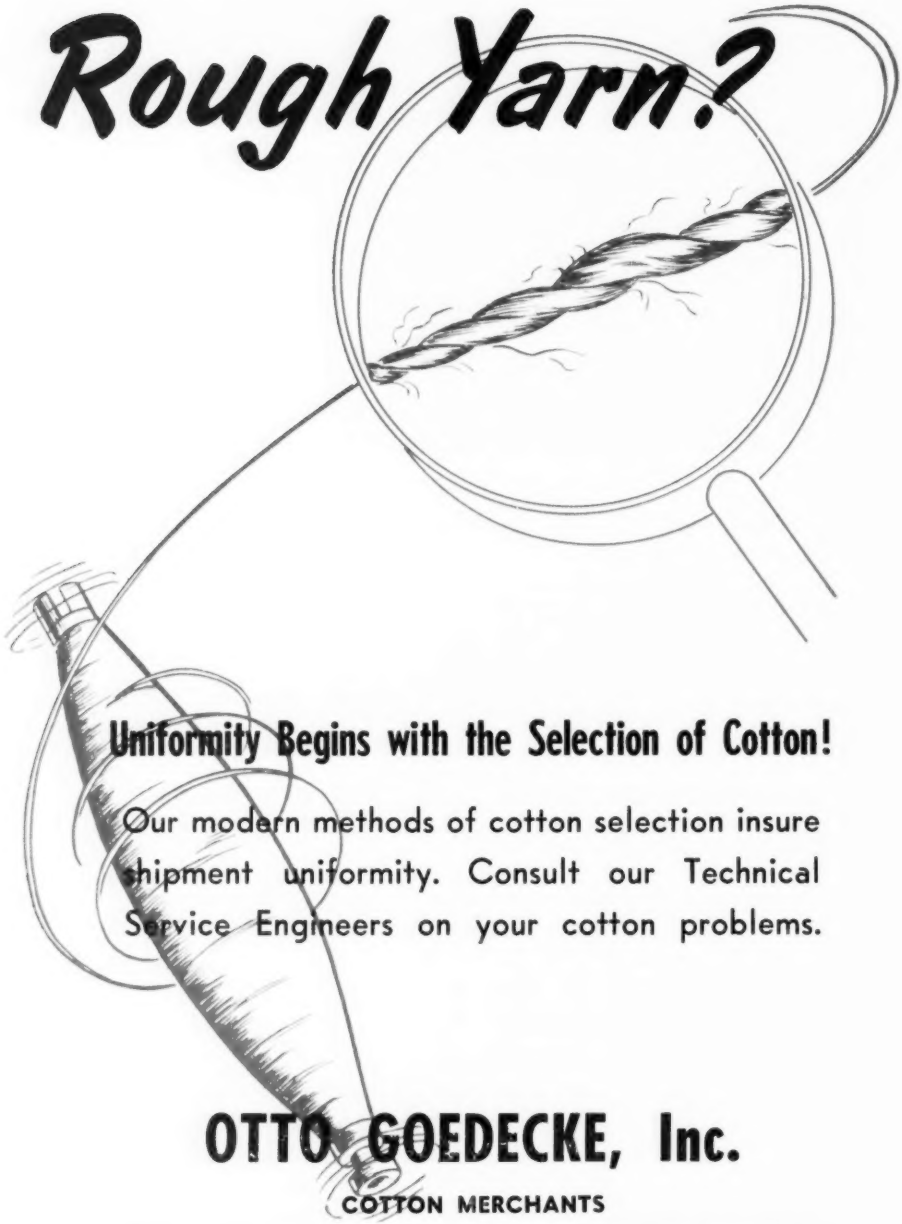
Takes Stock in Japanese Textile Concern. Stock in Naigai Kabushiki Kaisha, Tokyo, Japan, has been purchased by Julius Kayser & Co. Kayser was one of several firms negotiating a Japanese import-export arrangement. Products bearing the Kayser name are to be made by Naigai and distributed in Japan under arrangements by Kayser.

Union Slip Showing? According to the National Chamber Washington Report, nine million persons have joined the labor force in the last decade. But organized union membership has increased only 300,000, or one-thirtieth as much, in the same period of time. It is little wonder then, says the report, why organized labor was so anxious for the WSB to put the government's stamp of approval on the union shop as it did in the steel dispute and why unions cannot get members on their own merit. Fifty million American workers are resisting union membership today, and the number is growing steadily, it was said. The union shop, therefore, aided and abetted by the government, is the only salvation for the unions, the publication stated.

Flammability Standard. A "Recommended Standard for Flammability of Clothing Textiles," is now being circulated among representatives of the textile industry. When the acceptances represent a satisfactory proportion of the producing industries, the standard will be considered established.

Offers Posters on Job Security. The National Association of Wool Manufacturers is offering posters on job security to mills, upon request. The posters cite the liquidation of the Hockanum Mills, M. T. Stevens & Sons Co. division of J. P. Stevens & Co., Inc., at Rockville,

Rough Yarn?



Uniformity Begins with the Selection of Cotton!

Our modern methods of cotton selection insure shipment uniformity. Consult our Technical Service Engineers on your cotton problems.

OTTO GOEDECKE, Inc.

COTTON MERCHANTS

Hallettsville, Texas

affiliated

OTTO GOEDECKE, INC., OF ATLANTA
115 16th Street, N. W.
Atlanta, Ga.

Huntsville, Alabama

OTTO GOEDECKE, INC., OF MEMPHIS
56 South Front Street
Memphis, Tenn.

Conn. Mill operatives are admonished, "Your cooperation is essential to your job security."

Textile Institute Moved. The Textile Institute has moved to new headquarters at 10 Blackfriars Street, Manchester, England. The new quarters were officially opened on April 4, 1952.

Date for ASTM Meet. June 29-July 3 are the new dates for the 1953 meeting of the American Society for Testing Materials. The meeting will be held at Chalfonte-Haddon Hall, Atlantic City.

How to Explain Pension Plans. To assist employers in preparing effective booklets explaining pension and retirement plans to employees, examples of methods used by employers are included in a booklet "How to Explain Your Pension Plan to Employees." The booklet is published by the Employee Benefit Plan Review, 166 W. Jackson Blvd., Chicago. Single copies are free.

Union Organizer Troubles. The union organizer, who was having trouble getting members, invited two officers of the mill for a conference so they could come to terms; he admitted his union had spent too much money on that particular project and was planning on giving up his activities because of the poor financial return. Since he could get no help from the management of the mill in bringing members into the union, he left them with this statement: "The only two places down here that we can organize are those where management invites us in and those where management is an !!*?*!"

Acrilan Fabrics to Market. The Chemstrand Corporation has announced that fabrics and garments made of Acrilan acrylic fiber, until recently under wraps of research and development, will reach retail markets this fall.

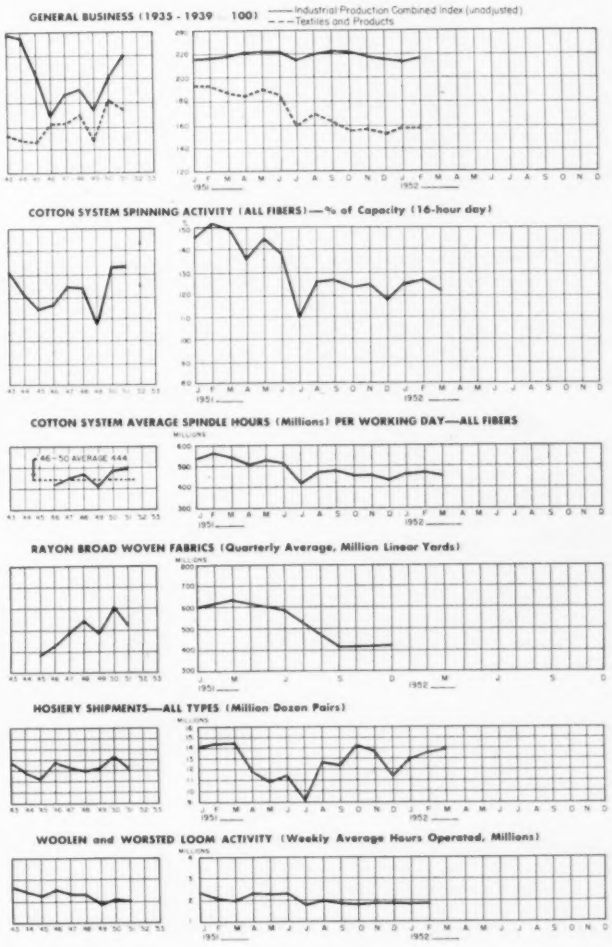
Bolster Hosiery Quality Now. If nylon hosiery selling is to return to normal, consumer confidence must be restored in the wearability of nylon hosiery, according to hosiery buyers. Solution to the problem may be twofold: (1) The industry should improve its quality standards, and (2) consumers should be educated in proper use of the product.

Duty Free Merchandise? George Hansen of the National Retail Dry Goods Association has taken exception to statements recently made regarding legislation now before Congress that would permit merchandise valued at $10 in Europe or Asia to be mailed to an American consumer duty free. Mr. Hansen stressed that the $10 duty exemption was actually far in excess of the average gross sale in America's stores which today amounts to less than $5.

News in Brief

Textile Industry Activity Charts

Source of information: Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.


GENERAL BUSINESS (1935 - 1939 100)
Industrial Production Combined Index (unadjusted)
Textiles and Products
COTTON SYSTEM SPINNING ACTIVITY (ALL FIBERS)—% of Capacity (16-hour day)
COTTON SYSTEM AVERAGE SPINDLE HOURS (Millions) PER WORKING DAY—ALL FIBERS
46 - 50 AVERAGE 444
RAYON BROAD WOVEN FABRICS (Quarterly Average, Million Linear Yards)
HOSIERY SHIPMENTS—ALL TYPES (Million Dozen Pairs)
WOOLEN and WORSTED LOOM ACTIVITY (Weekly Average Hours Operated, Millions)

SONOCO

Precision Paper Products

The SONOCO 3°30′ cone—a notable example of the research and technical "know how" that has kept pace with the ever-changing textile industry. This cone and its taper solves high speed winding, magazine creeling and knitting machine delivery, for rayon, nylon and other filament yarns, and is made with surface finishes to fit the specific job.

SONOCO PRODUCTS COMPANY

MYSTIC CONN. | HARTSVILLE S. C. | BRANTFORD ONT.

DEPENDABLE SOURCE OF SUPPLY

sonoco — ACROSS THE WORLD — PAPER CARRIERS — REG. U.S. PAT. OFF.

"Tycol Always cuts spindle drag

AN EXECUTIVE *Views*

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

Government Contracts

IT IS ALMOST impossible to state, with any degree of accuracy, what percentage of textile production is going into government contracts. We know, of course, that in some lines such as duck and tire cord, sales to the government, such as sales to the Army, Navy, Air Force, and Marines, have constituted practically the life blood of those particular segments. For the industry as a whole, however, it is very difficult to arrive at any percentage which can be backed up with figures.

One or two organizations have indicated that ten per cent of total textile production is probably going into government channels, but this is difficult to prove. At any rate it goes almost without saying textile mills view with considerable importance the approach of anybody in uniform who may be carrying a blank contract.

That brings us around to reminding you that if you have a government contract you had best be very careful that you understand the provisions of the Walsh-Healey Public Contracts Act of 1936. We have mentioned this particular Act before in these columns, but we feel it our duty to keep you informed of the latest developments. As you may have heard through the grape vine, on the Walsh-Healey front things have been moving at an alarming rate.

Just by way of review we should mention that the Walsh-Healey Act provides certain standards which must be observed by all corporations which have government contracts of $10,000 or more. One of these standards is certain minimum wage rates must be paid. The fly in the ointment is that these minimum wage rates may be determined by the Secretary of Labor based upon the minimum prevailing rates in that or similar industries and in that locality. What this rate shall be for any given industry has proved a bone of contention for some time.

Another point which has been rather widely disputed is what constitutes an "industry." For example, shall we say that cotton manufacturing constitutes an industry, that rayon manufacturing constitutes an industry, and that woolen mills be handled separately as a part of the woolen industry? Or, on the other hand, shall we say that cotton, rayon, and wool are all a part of the textile industry and that, therefore, one wage determination should be issued for the American textile industry?

Questions such as these are determined by the Administrator of the Wage and Hour and Public Contracts Division. It is customary that a hearing be held before such questions are determined. It must be quite obvious to all by this time that practically nothing is done in Washington without a hearing. At any rate it is relatively safe to say that *few* things are done in Washington without a hearing.

As things now stand in the textile industry, we have a minimum wage rate of $1.05 an hour for the woolen and worsted industry and we have a minimum rate for the remainder of the textile industry of $.87 an hour. Both of these rates, of course, apply only to government contracts of $10,000 or more, or to mills which are in the position of substitute manufacturers.

Fringe Benefits and Gov't Contracts

So much then for the background; now let's take a look at what's happening today. A hearing was scheduled for May 15 for the woolen and worsted branch of the industry and the attempt was to raise the minimum from $1.05 to $1.26½ plus certain fringe benefits. It is not difficult to realize what repercussions the inclusion of fringe benefits in a Walsh-Healey determination could have.

No formal hearing has as yet been scheduled for the remainder of the textile industry, but informal conversations have already been held with representatives of the industry. It appears likely at this time that a formal Walsh-Healey hearing will be held in the early fall and at that time the attempt will be to increase the minimum from the existing $.87 an hour to $1.13½ an hour. The labor unions have already indicated that when the hearing is held they will insist upon certain uniform fringe benefits being made a part of all government contracts.

If you already have a minimum wage of $1.13½ or higher, you may not feel that you are particularly concerned with the coming hearings. On the other hand, it should be realized that when once the government sets a minimum

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Right! The stability and lubricating value of Tycol Alweave Spindle Oils assure minimum wear and low power consumption, all helping to step up production by reducing drag and thread breakage.

A wide range of Tycol Alweave Textile Oils is specially designed in both mineral and compounded grades to cut costs in other processes in your mill.

For further information about Tycol Alweave Textile Oils, write, wire or phone your nearest Tide Water Associated office today.

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wage rate at a given figure it is difficult if not impossible to bring it down below that figure.

On the other hand, if your minimum rates are not as high as those which may be determined by the Administrator, then not only would it be necessary for you to raise your minimum to $1.13½, or for the woolen and worsted industry to $1.26½, but you would also find it necessary to raise all other rates because it is essential to preserve the differential between job classifications.

Thus, it is not difficult to see hat the pending hearings before the Administrator on this important question can have serious repercussions throughout the textile industry as well as throughout related industries. In many parts of the South, for example, where the knitting and cotton textile industry predominates, wage rates in this industry determine, to a large extent, wage rates in many other industries.

No one denies that a livable wage is to be desired in every industry including textiles and in every part of the country including the South; but what many of us question is how high such a wage can be raised before unemployment sets in. In other words, there must be a point of diminishing return beyond which wage rates should not be raised until productivity has also increased.

If you want to know what the score is you must have a copy of the program. We have indicated this before and never was it more true than in the case of attempting to follow the various ramifications of the Walsh-Healey Public Contracts Act. If your mill operates on government contracts, reread this column, go back and read several of the old columns or get yourself a good Philadelphia lawyer.

Mice and Men

How far can a nation fall before it loses its birthright?

That was a question predominant in the minds of many people during the last several months as they faced the sad specter of a president who had sold his country down the river for mess of union votes. When President Harry S. Truman directed Secretary of Commerce Sawyer to take over the steel industry there were few who doubted that he had paid off his debt to Philip Murray.

What they did wonder was whether or not the steel industry would ever be given back to its rightful owners, and they wondered too, what industry might be next.

Just for a moment let's take a look at the facts. You will recall that the unions had asked for a wage increase of $.17½ an hour and up, and that they had also asked that they be granted the union shop. This dispute went to the Wage Stabilization Board, an agency which had been created by executive order of the President. After debating for some time, and after receiving considerable pressure from both sides, the Wage Stabilization Board ruled in favor of the increase and recommended the union shop. When the steel companies refused to grant these recommendations the president seized the industry.

In defense of his action, President Truman indicated that he had seized the industry so that essential war-time production might not be stopped. When asked whether or not he would take a similar step in the case of newspapers and radio, he indicated and left a very strong inference that if the occasion demanded he would indeed take over both press and radio. Based on this, we might well ask ourselves what then is democracy and what is a dictatorship?

Leaders in the textile industry have been particularly interested in the union shop phase of this dispute. In case you may be fortunate enough not to know what a union shop is, we might say very briefly that under the provisions of the union shop new employees are required to join the union in one month or lose their jobs.

This is union security of the strongest sort and is generally resisted by most companies. This resistance is not always based on antipathy toward the union but is frequently based on the fact that a company believes that individual employees should have the right to join a union if they want to join it, and in like manner they should have the right to stay out of the union if they prefer to do that.

Many companies have taken the position that they would close their doors before they would force their employees to join a union.

For America, it may be later than we think.

June 12-14—Annual meeting, **Southern Textile Association**, Ocean Forest Hotel, Myrtle Beach, S. C.

June 16-Aug. 29—**Gordon Research Conferences**, Colby Junior College, New London, Conn.

June 27—Annual outing, **Philadelphia Textile Manufacturers Association**, Torresdale-Frankford Country Club, Philadelphia, Pa.

June 29-July 3—Annual meeting, **American Society for Testing Materials**, Hotels Statler and New Yorker, New York City. (Changed from June 22-27).

Sept. 8-10—**Third National Standardization Conference**, sponsored by the American Standards Association, Museum of Science and Industry, Chicago, Ill. To be held in conjunction with Centennial of Engineering.

Sept. 9-13—**7th National Chemical Society Exhibit**, the Coliseum, Chicago, Ill.

Sept. 10-11—Fall meeting, **The Fiber Society, Inc.**, Princeton, N. J.

Sept. 11-13—Third **Canadian Textile Seminar, Queens University**, Kingston, Ontario, Canada (previously scheduled for Sept. 18-20).

Sept. 25-26—Annual convention, **National Association of Cotton Manufacturers**, Wentworth-by-the-Sea, Portsmouth, N. H.

Oct. 6-11—**Seventeenth Southern Textile Exposition**, Textile Hall, Greenville, S. C.

Oct. 16-17—Annual convention, **The Quartermaster Association**, Biltmore Hotel, Atlanta, Ga.

Oct. 24-30—Annual conventions, **Carded Yarn Association** and **Southern Combed Yarn Spinners Association**. Convention cruise to Bermuda.

Nov. 6-8—**31st annual convention of the American Association of Textile Chemists and Colorists**; also the textile dyeing and finishing exposition, Hotel Statler, Boston, Mass.

Nov. 19—**34th annual meeting, American Standards Association**, Waldorf-Astoria, New York, N. Y.

Specify WALKER HEDDLES

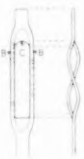
Because

THERE ARE WALKER HEDDLES
designed for every weaving need.
Yet these important basic design features
are common to all Walker heddles.

Engineering development and field service
back your selection of Walker equipment.
Consult your Walker or Draper representative
the next time you need loom harness
whether it be a single frame,
a few repair heddles,
or complete equipment of your mill.

Because

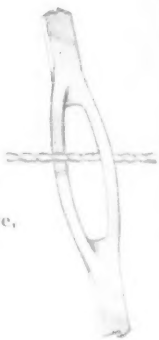
WALKER HEDDLE ROD SLOTS are vital
to the long-wearing qualities
of your heddles. These slots
are designed with fully rounded heads
and parallel walls to concentrate
all the wear
at the central point "C"
instead of the vulnerable
thin sides "B" of the rod slot.
This design feature of all
Walker heddles, assures longer
heddle life and greater freedom
of the heddles, to allow
for warp adjustment.



Because

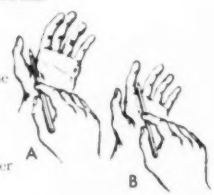
THE EYES of Walker heddles,
regardless of the type or turn
that you use, are designed
for easy yarn passage.
The broad base of the top
and the bottom of the eye
and the smooth polished sides
for the yarn to pass over
assure the minimum of chafing.

The enlarged diagram
of this typical Walker heddle eye,
shows how the walls of the eye
are twisted almost parallel
to the warp threads,
giving smooth yarn passage.
The warp remains parallel
even when you are weaving
high count fabrics.



PROVE IT TO YOURSELF

USING A PENCIL to simulate
a warp thread
note how easily it travels
when passed through the broad base
between thumb and forefinger
(bottom of Walker heddle eye
in Figure A) while the pencil
(warp thread) binds in the small
space between first and second finger
(typical of oval or V bottom
of ordinary heddle eye).



Because

THE WIRE of Walker heddles,
made from the finest materials available,
is highly finished and polished
for long heddle life
and clean, stain-free, fabrics.

For cotton, cadmium plated heddles are
recommended because of their lower cost.
Cadmium is highly resistant to corrosion
even in extremely humid atmospheres.
Its slight tendency to streak or smudge warps
is not objectionable since the marks
are easily removed during the finishing processes.

Wool and worsteds call for nickel plated
heddles since nickel does not smudge.

Stainless steel heddles are the best
for the weaving of all synthetic yarns.
Their long life and complete freedom from
staining give them the advantage of the lowest
long-run cost. They will not streak
or smudge the warp and are easily kept free
of lint and dirt. Since they are not subject
to corrosion, they last longer
and produce better quality cloth.

WALKER DIVISION OF **HEDDLES • HEDDLE FRAMES • REEDS**
DRAPER CORPORATION
ATLANTIC & RUTH STS., PHILA., PA.

NEW Equipment AND MATERIALS

Precise Control is Feature of New Tinting Machine

The "Unitint" Machine receives the blended stock from the blending line and feeds a controlled amount to an all-stainless steel, enclosed tinting chamber. The rate of output, in pounds per hour, can be automatically regulated to the rate of the pickers being fed or to the rate of delivery of the blending line.

The tinting machine is said to be particularly effective when used with the Dodenhoff Fiber Meter automatic blending system, where the controlled flow of stock can be easily accomplished by timing the accurate weighings of blended stock to coincide exactly with the picker rate. Thus, when the picker is running, an exact, known quantity of stock is passing through the Unitint.

Since the amount of stock passing through is a known factor, the precise percentage of tint can be evenly applied by a positive displacement pump and spray nozzle, the manufacturer claims. After the fibers have been tinted on the top conveyor belt, they move through a revolving agitating blade beater, in conjunction with a curved stainless steel plate, to distribute or blend the tint. This agitator blade action is said to "blot" the more heavily tinted fibers against the lesser tinted ones to even the tint distribution.

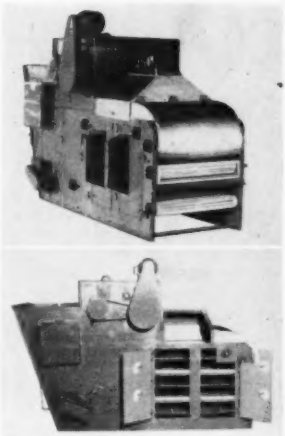
From the blade section, the stock is carried slowly rearward on an intermediate belt, and then dropped to the bottom belt which carries the fibers to a pipe or conveyor to the picker. In moving along these belts, the tint has further opportunity to disperse through the fibers and to dry out. A bank of infra-red drying lamps can be provided to speed up drying action in the case of heavily tinted stocks.

The unit is compact and constructed of heavy steel plate and heavy gauge nickel bearing stainless steel. All shaft bearings are sealed, self-aligning ball type. The enclosed tinting chamber is hinged as is the heavy curved plate for easy access in cleaning and changing tint colors. Large doors on both sides provide access to the drying belts.

Faithful reproduction of various shades, reduction in the amount of tint used, evenness of colors, elimination of tags and soggy batches, and cleanliness are advantages claimed for the unit which comes fully equipped with motor, belting, tint pump, and controls. It has an effective capacity up to 1200 pounds per hour.

Textile Equipment Corp., Greenville, S. C.

For additional data, request item F-402, using business reply card on page 228.

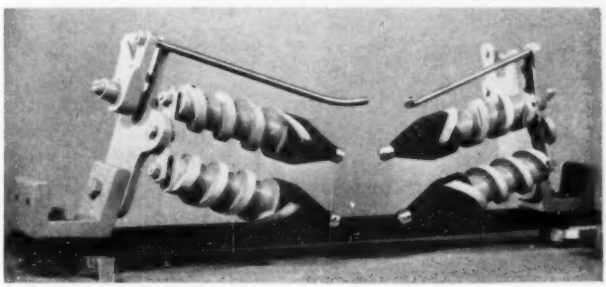


Machine for Taking Out Turned Selvages

The "Taker-Outer" is the name of a new device for taking out turned selvages. Spiral rolls nine inches long, driven by the cloth, accomplish the taking out or turning back of the turned selvages, the manufacturer states. One spiral roll is in front and the other in back of the cloth.

Taker-Outers can be attached to existing cloth guiders or can be sup-

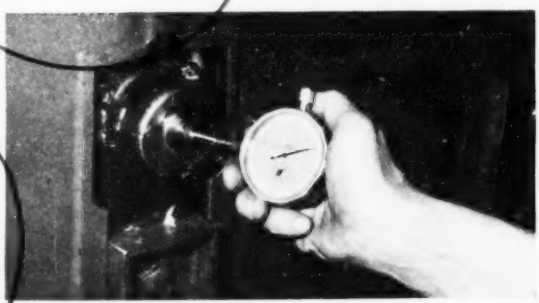
"Taker-Outer" devices mounted on brackets.



Seen Only In The Best Circles

JENKINS *Dynamically Balanced* SPINNING CYLINDERS

ALL MACHINE PARTS PRECISION MADE IN OUR OWN SHOPS



JENKINS DYNAMICALLY BALANCED CYLINDERS *are precision engineered for vibration-free performance at all speeds.*

It pays to "go around" with the best in the trade—and in spinning cylinders, that's Jenkins!

The money these smooth-running cylinders save you by eliminating excessive wear on frame parts . . . by reducing cylinder replacement and down time . . . by smoothing out yarn production and quality . . . prove beyond doubt that *the best is cheapest in the long run!*

JENKINS

ENGINEERED PRODUCTS

JENKINS METAL SHOPS
GASTONIA, NORTH CAROLINA

plied with brackets and used any place where cloth travels in open form. The unit also has an attachment regularly supplied which tightens the selvage of the cloth before taking out the turned selvages. Ball and Oilite bearings are used throughout.

Stainless steel operating parts can be supplied in place of other metals where required.

Guider, Roll and Service Co., P. O. Box 3747, Peninsula Station, Daytona Beach, Fla.

For additional data, request item F-105, using business reply card on page 228.

Cam Driven Dobbies with Paper Patterns

The Staubli dobby, which was recently made available in the United States, has knives driven by cams. According to the manufacturer, the cam drive assures a shed which stays open longer and changes more rapidly than the conventional crank drive.

The crossing of the shed always takes place at the same moment in relation to the position of the lay, it is claimed. The cams are interchangeable and keep the shed fully open during 60, 90, or 120 degrees of the turn of the crankshaft. The shuttle enters the shed when it is already fully open and it is still open when the shuttle leaves the shed on the other side. The quick change of the shed is said to have the advantage that the single threads, when crossing each other, will not stick together, even if rough or hairy.

This cam-operated dobby can be supplied with patterns of either wooden lags and pegs or paper cards.

Advantages claimed for paper patterns include: paper is cheap, one yard of it containing 300 picks; it is possible to have patterns 12 to 15 yards in length (up to 4500 picks); when more than one loom is on the same pattern, the paper card has to be cut only once—all others are copied from the first one in only a fraction of the time used for cutting the first pattern; time and manpower are saved since it is possible to keep one or two repeats of the different weaves in a file so that when a particular pattern is to be woven again, pattern cards can be copied from the piece on file.

It is pointed out that if paper patterns are utilized, it is necessary to have a card cutting and copying machine. One of these machines, however, will be sufficient for several hundred dobbies, the manufacturer reminds. A skilled operator of the card cutting machine will be able to cut about 2-3 picks a minute for an original pattern; duplicates of this pattern can be made at the rate of 160-200 picks a minute, it is claimed.

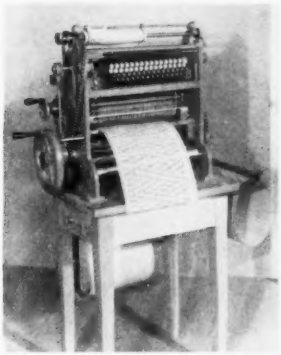
Hand or mechanical pickfinders can be supplied on all Staubli dobbies, enabling the weaver to disengage the dobby from the loom and turn it backwards or forward when finding broken picks; when the correct pick is open again, the dobby is re-engaged with the loom and weaving continued. This device is also handy for lowering all heddle frames so all warp threads will be under the same tension when loom is to stand for long period, eliminating start-up marks when looms run again.

Staubli dobbies can be fitted to any make of loom.

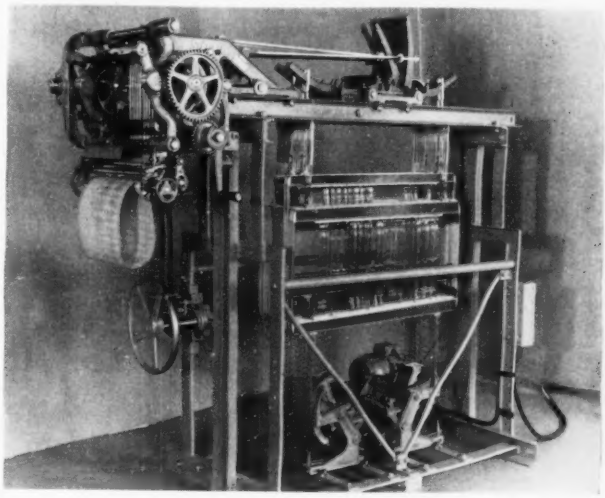
H. J. Theiler Corp., Whitinsville, Mass.

For additional data, request item F-115, using business reply card on page 228.

Staubli card cutting and copying machine (Theiler).



The Staubli dobby (Theiler). Note paper pattern on machine.



Long, Trouble-Free Service with New Tufted-Type Metal Core Brush

A tufted-type metal core brush now on the market features a new method of binding the tufted bristle on the metal core.

Tufts of bristle are arranged in slotted bands of stainless steel or copper. This tufted construction is said to be particularly efficient for blanket washing, raising the nap of

(*Continued on page* 169)

Here's a Peach of a Picker!

No doubt about it—this red-headed Dayton Super Picker is the best of the picker crop! In durability, for instance, the Super Picker outlasts other makes, often by as much as 2 to 1. Think what that means in terms of less down-time and more cloth production! And shuttles last longer, because the Dayton Super Picker runs cooler.

The flared bottom makes picker stick easier to apply . . . narrow back permits free non-wear on lay-in strap . . . and rounded front edges eliminate hanging filling.

Give the Super Picker a trial on your high-speed or standard speed looms. See for yourself, right in your own mill, how it will out-pick any ordinary picker you can buy! Ask your salesman, or: Dayton Rubber Co., Textile Div., Woodside Bldg., Greenville, S. C.

FOR LOW COST EFFICIENCY . . .

The Dayton Thorobred Picker! Patented symmetrical loop construction holds picker in correct contact position. Picker stick hole is designed for correct shuttle contact, eliminates striking at an angle. Performs with top efficiency, at low cost.

Dayton Rubber

Since 1905

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

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"Textile Training" Rang the Bell

The 24-page special section on "Textile Training" in the March issue of TI must have caught a lot of people thinking about training methods. Since its publication the editors literally have been swamped with requests for additional copies.

Fortunately, an overrun was made and our friends who requested the copies have been served. Five textile associations distributed it to members. If you do not have a copy for your files, supply is still available —just write us.

"If still readily available, I would like very much to have four or five reprints of your splendid 'Textile Training' article, March issue. . . " Earle R. Stall, president, **The Florence Mills**, Greenville, S. C.

" . . . just finished reading your excellent, informative report on 'Textile Training' . . . appreciate it very much if you would send us two more copies . . . . " N. L. Naidish, **Trylon Mills, Inc.**, Jersey City, N. J.

" . . . would you kindly send us reprint of your excellent article 'Textile Training' . . . " Paul C. Beatty, resident manager, **Halifax Worsted Mills.**

" . . . . appreciate very much your sending . . . . 'Textile Training' . . . " William F. LeGrand, **Shelby Cotton Mills.**

" . . . . please send us five copies of 'Textile Training', a special section from Volume 116 No. 3 . . . . " Harvey R. Upchurch, **Carrboro Woolen Mills**, division of Pacific Mills.

"I have read your 'Textile Training' program in your March issue and I would be very much interested in securing twenty-five to thirty copies if available, and at your earliest convenience. . . . " G. Fawthrow, resident manager, **Drakes Mill.**

" . . . . will appreciate very much receiving extra copies of the 'Textile Training' special section which appeared in TEXTILE INDUSTRIES. We can use up to 20 copies if available, but will appreciate a smaller number if the supply is limited. . . " Garnett W. Savin, Jr., personnel director, **Frank Ix & Sons Virginia Corp.**

" . . . . appreciate your sending four copies of the article 'Textile Training' which appeared in the March 1952 issue. . . . please mark these for the attention of the writer." W. A. Karl, president, **Firestone Textiles.**

Space does not permit us to carry extracts from all letters or even all of the names of those requesting "Textile Training." Some of the earlier ones who asked for the story were:

William H. Archard, assistant purchasing agent, **Alexander Smith, Inc.**; L. A. White, plant superintendent, **Spindale Mills, Inc.**; M. V. Wells, personnel director, **Klopman Mills, Inc.**; W. P. Wright, Jr., **Greenwood Mills, Inc.**; J. E. Barbre, division purchasing agent, **Pepperell Manufacturing Co.**; J. V. Moffitt, Jr., president and treasurer, **Wennonah Cotton Mills Co.**

Also, Sec. of J. B. Goldberg, **J. P. Stevens & Co., Inc.**; G. J. Asensio, manager, **Clark Thread Co.**; William R. Beuret, assistant to president, **Newberry Mills, Inc.**; Merwin R. Haskel, president, **Cohn-Hall-Marx Co.**; J. A. Conner, vice-president, **Hyde Park Mills, Inc.**; Glenn Gardiner, vice-president, **Forstmann Woolen Co.**; C. A. Grabarek, **Atwater Division of Hess, Goldsmith & Co., Inc.**

Also, A. C. Link, manager, **Stark and Reid** plants of **United States Rubber Co.**; D. W. Lyon, manager textile sales, **Libbey-Owens-Ford Glass Co.**; F. W. Shoemaker, **Chicopee Mfg. Corp.**; Wm. M. Malloy, purchasing agent, **Cheraw Cotton Mills, Inc.**; F. A. Snyder, **Clark Thread Co.**; E. Russell Sanborn, director of industrial engineering and labor relations, **Amoskeag-Lawrence Mills, Inc.**; P. B. Stephens, manager, **Clark Thread Co.**; Wyllys H. Taylor, chief, cotton branch, textile division, **Department of Commerce.**

Also F. W. Jahns, Jr., assistant plant manager, **Continental Diamond Fibre Co.**; Oscar W. Ross, **Celanese Corp. of America**; W. C. Estes, personnel director, **Opp Cotton Mills**; R. M. Quin, **Textileather Corp.**; Arthur S. Kelly, **National Safety Council**; Howard J. Barrowclough, assistant superintendent, **Berkshire Fine Spinning Associates, Inc.**; Kenneth M. Brown, personnel manager, **Kanmak Mills, Inc.**; L. H. Ballard, director of industrial engineering, **American Yarn & Processing Co.**

Also, J. R. Dover, III, **Dover Mills Co.**; S. W. Jones, training director, **United Merchants & Manufacturers, Inc.**; Joe Golden, personnel director, **Shuford Mills**; George L. Coxhead, personnel manager, **Burlington Mills Corp.**

Outside the U. S. the early requests came from such mills and men as: Leo R. Martin, **Canadian Celanese Co. Ltd.**, Drummondville, Canada; P. A. G. Bisschop, **Hengelo**, Holland; **Jas. Williamson & Son, Ltd.**, Lancaster, England; W. G. E. Aird, vice-president and managing director, **Montreal Cottons Ltd.**, Valleyfield, Canada; T. Kimoto, **Kanegafuchi Spinning Co., Ltd.**, Osaka, Japan; **Ashton Brothers & Co., Ltd.**, Hyde, Cheshire, England.

The foregoing were served with from one to twenty-five copies of "Textile Training." In addition, five textile associations considered the article of value to their members and distributed it:

"I have read with great interest the article 'Textile Training' which appears in the March edition of TEXTILE INDUSTRIES, and you are to be congratulated for developing and disseminating that type of information.

"Proper employee training, beginning with the new operator and continuing on through the executive, is of the utmost importance, and your article should do much to stimulate thinking in that direction and to promote constructive ideas.

"We should like very much to distribute copies to our members." Frank L. Carter, secretary, **Cotton Manufacturers Association of Georgia.**

" . . . . would be very happy to have 300 copies of this to distribute to our members if this is agreeable to you. . . . " Earle E. West, secretary, **Underwear Institute.**

" . . . . are interested in obtaining copies of this reprint for distribution to our membership. . . . " Joseph E. Hoesl, secretary, **National Association of Finishers of Textile Fabrics.**

" . . . . to send out with our bulletin the very interestingly prepared report of 'Textile Training' . . . . shall look forward to receiving the copies. . . . " Miss Irene Blunt, secretary, **National Federation of Textiles, Inc.**

" . . . . comprehensive article . . . . since both labor costs and labor productivity are to a large extent traceable to the amount and quality of training invested in an employee, we feel this [article] will be of particular interest to management and to plant personnel or training departments. . . . " **American Cotton Manufacturers Institute.**

Some time later several textile associations requested additional copies to serve their members with extras.

A number of textile schools also received copies, upon request, to pass along to students.

Although TI's editorial staff was kept busy mailing out the articles, they were delighted at the response and the opportunity to serve the industry further. And to Associate Editor Hunter Hughes who authored the story, orchids for a job well done. (A few reprints still available.)

SHORTS and REMNANTS

The Greenville Show

The 17th Southern Textile Exposition (Greenville Show) is drawing near — Oct. 6-11. There promises to be new equipment and materials of interest to all. Make your plans to attend this biennial trade show.

Blood Donor

"Many thanks for carrying the splendid story on the mill people of the Chattahoochee Valley giving their blood [March issue]. Their's is but the story of a great number of such mill communities throughout the Southland . . . story points the way to successful participation in this program. . . "

C. B. FLIGG
American National Red Cross
Atlanta, Ga.

To Complete File?

"We would like to have the following issues of TEXTILE INDUSTRIES: February 1950, March 1950, April 1950, and July 1950."

J. M. CONNER
Hyde Park Mills, Inc.
Covington, Tenn.

Identical in Performance

Every step in the production of Textile Spring-Beard Needles is scientifically controlled to give you needles that are identical in every detail. For only when needles are exactly the same, can you be sure of stitches that are perfectly even.

Uniform performance is only one of the advantages you receive from Textile Spring-Beard Needles. A special steel formula, superior tempering and Textile's quality controls—automatic and electronic—give you better hosiery fabrics, bigger profits.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full-Fashioned Knitting

For Tricot Knitting

". . . Still a Free Nation"

AMERICA is still a free nation.

When Federal Judge David A. Pine ruled that the seizure of private industry (the steel mills) by the government was unconstitutional, he performed in one legal act and without force that in which the combined peoples of the dictator nations have failed.

Whether or not his ruling will be upheld if carried to a higher court*, he has in his legal opinion abruptly retarded the dangerous trend in socialism, dictatorship, and even bureaucratic control into which this country has been drifting.

His ruling may well bring to America a new era of public consciousness whereby we stand to preserve the civil liberties which we have taken for granted, but which we have come so close to losing.

Within our memory, never has an executive order been so questioned by the Court or the executive branch so chastized. We quote from Judge Pine's prepared ruling:

There is no express grant of power in the Constitution authorizing the President to direct this seizure. There is no grant of power from which it reasonably can be implied. There is no enactment of Congress authorizing it.

At this point in his opinion, the Judge was kind enough not to point out that Congress has provided legal machinery whereby disputes between labor and management may be aired, nor did he point out legal provisions for applying the cooling-off period.

***The Government of the United States was created by the ratification of the Constitution. It derives its authority from the powers granted to it by the Constitution, which is the only source of power authorizing action by any branch of government. . . . Neither singly nor in the aggregate do [sections of the Constitution] grant the President, expressedly or impliedly, . . . power to take such action as he may deem to be necessary, including seizure of properties, whenever in his opinion an emergency exists. . . . Instead, in Congress is lodged, within constitutional limitations, the power to "provide for the common defense and general welfare."*

Then quoting from a former president who was also a Chief Justice, Mr. Taft, the Judge included in his opinion:

. . . the President can exercise no power which cannot be fairly and reasonably traced to some specific grant of power or justly implied and included within such express grant as proper and necessary to its exercise. Such specific grant must be either in the federal Constitution or in an act of Congress. . . .

Judge Pine stood on that as a correct statement of the law.

Counsel for the government had cited prior acts by the government as the precedent for seizure of the steel mills, to which Judge Pine replied, "apparently according to [government counsel] theory, several repetitive, unchallenged, illegal acts sanctify those committed thereafter. I disagree."

The President does not have the power of eminent domain. . . .

To government counsel's argument that the findings of the emergency are "not subject to judicial review," Judge Pine said in his ruling:

This spells a form of government alien to our constitutional government of limited powers. I therefore find that the acts of defendant [government] are illegal and without authority of law.

Taking into consideration the damaging effects of a strike on a nation heavily involved in defense preparation, the Judge gave this opinion:

I believe that the contemplated strike, if it came, with its awful results, would be less injurious to the public than the injury which would flow from a timorous judicial recognition that there is some basis for this claim of unlimited and unrestrained executive power . . . such recognition would undermine public confidence in the very edifice of government as it is known under the Constitution.

We go along with Judge Pine all the way. America has taken its chances of survival in war, and will take those chances again when and if necessary—but America prefers to take those chances in war as a free nation and as a free people, and not as a nation ruled by dictatorship.

It is a travesty in some respects about the attitudes taken by both managements of American business and by labor in the steel seizure.

In this case, the steel companies' ox had been gored. The principle largely was ignored by many business men; they considered the seizure by the government to be largely the affair of the steel companies.

It was not. The seizure could well have been accomplished in any industry or for any business, large or small. It was the time for all business to fight. Yet the load in the steel seizure was carried by the steel industry.

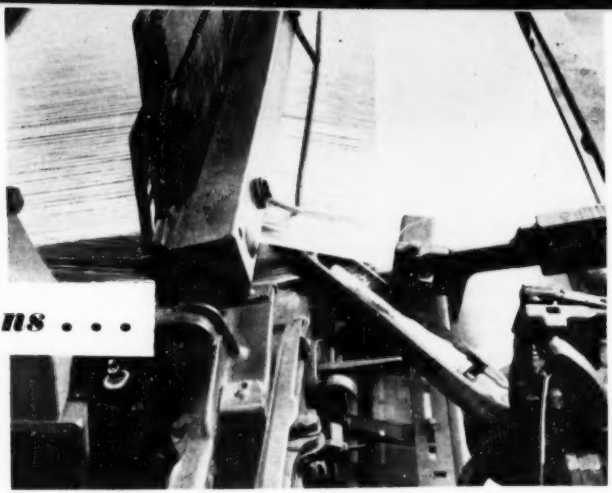
For any beneficial result, all American business can express its gratitude to the men of steel.

Labor unions also took a short-sighted view of the situation. They overlooked the fact that the shoe could well have been on the other foot. If by executive order the steel industry could be seized, so by executive order could the unions be seized or disbanded, in the so-called public interest.

The unions went along with the executive branch in the steel seizure because it was expedient for them to do so, at the time. At some future date the decision of the man in power could have been against them. The unions accepted a temporary gain for a possible permanent setback, and played poker with a personality and politics—with a principle at stake.—J. C. F.

*Of necessity, a monthly publication must work well in advance of issue date; this was written April 30, the day after Judge Pine's ruling. The case has now been argued before the Supreme Court, but at press time no decision had been made by the Court.

**Italicized passages from Judge Pine's ruling.



When this happens . . .

How Can Downtime Be Reduced?

DELAYS in getting a stalled loom back into operation are costly. The sooner the fixer tackles necessary repair work, the better are chances for higher weave room efficiency. At Clinton Silk Mills, Holyoke, Mass., no time is wasted in alerting the loom fixer when a loom starts acting up.

Fully electrical message transmitters and receivers guard against

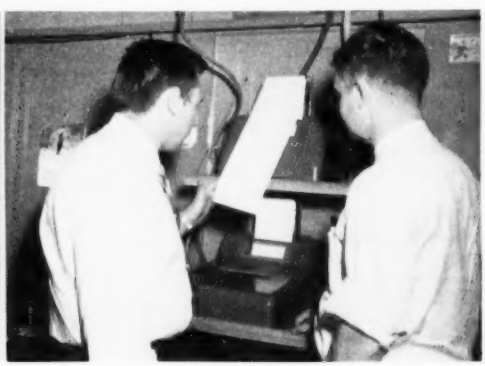
Staff Prepared

that. These machines, TelAutograph telescribers, are the nerve center for the weave room. They send, receive, and record messages.

When a loom knocks off and repairs are called for, here is the chain of events. The weaver flicks the start button of a telescriber near her loom station, picks up the writing stylus, and inscribes her report on the message blank of the transmitter. Instantaneously and automatically, receivers in the superintendent's office and station of fixer reproduce the report exactly as written by the sender.

Once the weaver has written out the message on the transmitter,

REPORTING A BROKEN REED on one of the looms in her stand is weaver Kathrine Sroka. She knows that the message "91 Broken Reed" which she has written on her telescriber transmitter will be faithfully reported to the loom fixer at his station and the superintendent's office by the telescriber receivers located in each place. The report becomes a matter of record, responsibility is assigned, and looms are serviced quickly. In the photo at the right, plant manager Clinton Hampson (left) and superintendent Ralph Lux examine telescriber recordings in Clinton Silk Mills' office. At a glance they have an idea of what's going on in the weave shed.



she is divested of all further responsibility and is free to tend her primary job of weaving. Even though the fixer may not be at his station to receive the message, his telescriber functions as a proficient secretary—faithfully and accurately filing the facsimiles.

By storing reports of every malfunction or unusual situation, the telescriber system gives the superintendent a running account of weave room operations. At a glance, conditions in the mill are revealed.

Close liaison between fixer and superintendent is maintained by means of this communications apparatus. A transmitting unit in the superintendent's office places him in constant touch with the fixer. Weave room operations are more than just an open book to mill manager Clinton W. Hampson—they are a roll of telescriber paper.

New Blends Create Problems for Dry Cleaners

Difficulties encountered by members of the New York Neighborhood Cleaners Associations in endeavoring to dry clean apparel made of "new and untried blends of man-made fibers with natural vegetable or animal fibers" have caused them to request assistance of the Federal Trade Commission and members of Congress in what is termed "a serious issue confronting the nationwide dry cleaning industry."

Since spinners, weavers, dyers, and finishers—as well as fiber manufacturers, converters, and retailers—would be affected by the adoption of recommendations contained in the Association's letter, an extract of it is published here:

Federal Trade Commission
Washington, D. C.
Gentlemen:

The continued and increasing number of unfortunate and costly experiences which the members of the New York Neighborhood Cleaners Associations are experiencing in endeavoring to dry clean apparel made of new and untried blends of man-made fibers with natural vegetable or animal fibers convinces this Association that more adequate protection is needed by retail merchants, by the purchasing public, and last—but not least—by the dry cleaning and laundering industries of this country.

On behalf of the New York Neighborhood Cleaners Associations let me cite a number of the problems which we face and which appear to us to be insoluble unless we obtain the protection of either the Federal Trade Commission or of a law by Congress which will require clear and explicit statements from the manufacturer or the distributor regarding the basic qualities of wear, service, and cleanability of the fabrics in garments.

(1) It is becoming a more and more common practice to imitate fabrics of proven serviceability by substituting cheaper fibers or blends of fibers, cheaper dyeing processes, and chemical finishes. The result is that dry cleaners, judging the fabric by its external appearance, find that it will not withstand ordinary cleaning techniques which were used successfully on the original fabrics.

(2) Ignorance or disregard on the part of manufacturers is resulting in the production of new fabrics which cannot be cleaned by any existing process. The unserviceability may be due to innovations of fibers or yarns; in the weaving; in the dyeing, or in the finishing. The public should be told of the service limitations of these fabrics. The dry cleaners should be told if they can be cleaned and by what process.

(3) New synthetic fibers are being marketed prematurely without having behind them any history of proven service. These new fibers are used in fabrics alone or in blends with animal or vegetable fibers. Some of these blended fabrics have characteristics which may be of great service to the public, but many of them simply cannot be dry cleaned.

(4) In the cellulose fiber field, rayon is being widely used alone or in blends to make fabrics which were formerly made successfully from acetate, silk or nylon. In using rayon, many of these fabrics after being woven are stretched and finished with water soluble sizing. Mere drops of moisture—raindrops or a spilled drink — dissolve the sizing. The dry cleaner must use moisture on any garment in order to dissolve any water soluble stains such as sugar, liquor stains, etc. Perspiration odors can only be removed by water. There is no known method by which the dry cleaner can possibly clean these garments satisfactorily.

The New York Neighborhood Cleaners Associations urgently requests that the Federal Trade Commission make a thorough investigation of present conditions in the interest of the consuming public and that a Trade Practice Conference be called at the earliest possible date to establish fair trade practice rules which will require the following:

(a) That a label containing the percentage of wool, rayon, acetate, acrylic or polymer fiber content be sewn onto the garment.

(b) That the presence of sizing or a chemical finish such as the finishes which are applied in an effort to improve fabric appearance or to reduce tendencies of synthetic fibers to wrinkle be stated on a sewn label.

(c) That the percentages of new chemical fibers present be stated in a label attached to the garment.

(d) That wherever fabrics in the garment containing these new fibers require special processes in dry cleaning or laundering, directions be affixed to the label.

PAUL MARCUS
President

Abrasion Test for Sized Yarns

A useful method for evaluating warp sizing on spun synthetic, wool, and cotton yarns.

By DANIEL L. WORTH
Textile Chemist, Mooresville Mills, Inc.

IN THE evaluation of sized warps in the weave room, three factors are usually considered: (1) Opinion of weavers; (2) Loom efficiency; (3) Warp breakage counts.

Weavers' and overseers' opinions are good for screening good warps from bad warps, but sometimes their opinions are misleading when the differences between warps are not very large. The opinions are based on preceding warps which may have been either better or worse than the average.

Loom efficiency is a factor which may provide useful information, but the data may be misleading in that loom efficiency is affected by many other factors such as differences in weavers, looms, and atmospheric conditions.

Warp breakage counts are considered to be the most reliable method of evaluating sized warps but these counts are subject to the same limitations enumerated for loom efficiency. Despite many shortcomings, sized warps have been evaluated by these methods for many years. This has been possible because large numbers of warps are evaluated, a fact which tends to minimize the shortcomings.

Brown[1] lists the causes of warp breaks as: "(1) Knots, (2) impurities, (3) chopped, (4) abrasion, (5) soft yarn, (6) unknown, (7) twisted ends, (8) taped ends." He attributes abrasion, soft yarn, twisted ends, and taped ends to sizing. His experiments show that 24.7% of total warp breaks may be attributed to sizing, of which over half or 13% is due to abrasion. Knots accounted for 20.8%, impurities for 13%, chopped for 7.8%, and unknown for 33.8% of total warp breaks.

Abrasion accounts for slightly over half of the warp breaks which may be charged to sizing. It should be possible to devise an abrasion test which could be used to evaluate the abrasion component on a small scale. The Penick & Ford Sized Yarn Abrasion Test[2] is such a test which has been used successfully for several years in evaluating differences in abrasion resistance of sized warps. The modification of the Kendall Abrader described herein is another such test.

An abrasion test may also indirectly predict some of the breaks which Brown attributes to knots and impurities. Abrasion resistance has been found to decrease when the yarn contains excessive size. Excessive size gives excessive stiffening of knots and impurities and causes them to break out adjacent ends. This same excessive sizing will also increase the tendency for ends to become taped or stick together. Thus we see that an abrasion test will give a direct indication of 50% or more of the warp breaks attributed to sizing but will also give an indication of the number of certain other types of breaks.

The Kendall Abrader. The abrader was designed at Kendall Mills and is a short cross-section of a loom with no shuttle or provision for the picking or beat-up motion. During a test the ends are abraded in the heddle eyes, the reed, and against each other during the shedding operation. As the abrasion continues, a carriage slowly moves the warp ends forward in the direction in which they would travel during weaving. When the most forward position is reached the carriage is brought back and allowed to move forward again. The cycle is repeated for a certain number of times.

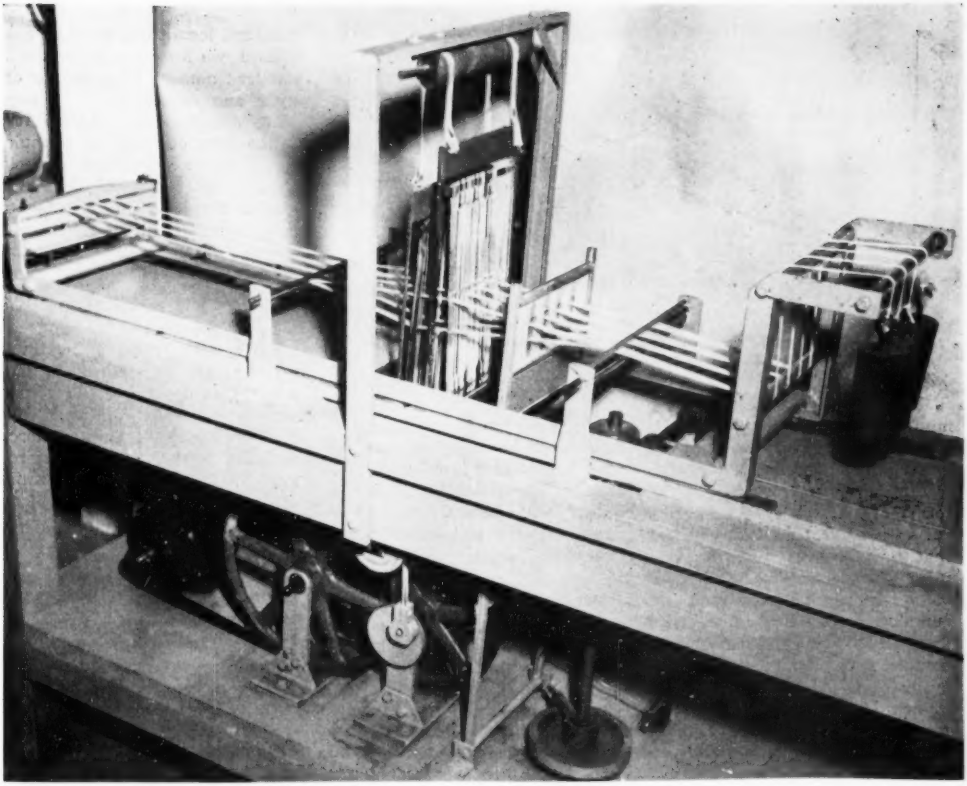
During the test, end breakage is recorded according to the number of reed cycles which have occurred, and fiber shedding is observed. This test is reported to be very valuable in the screening of sized warps. The main disadvantage appears to be the long length of time which the test must run before end breakage occurs.

Our experience has shown that several days running is usually required to produce any appreciable wearing on the yarn. On a loom, the greatest stress and wearing action occurs during the beat-up motion when the filling is beat into the fell of the cloth.

A comb was installed forward of the foremost position of the reed to provide a beat-up motion, and the ends were crossed before being laid into the comb. In view of the improvised beat-up motion, it was necessary to disconnect the mechanism which moved the yarn carriage forward. Also, it was necessary to abrade a larger number of ends to obtain significant results.

Test Procedure. Thirty ends, which have been conditioned at standard conditions for at least 24 hours, are threaded into the modi-

References.
1. Brown, B. J., J. Text. Inst. 40, 301-16 (1949).
2. Stallings, J. W. and Worth, D. L., Text. Ind. 114 No. 3, 94-98 (1950).



KENDALL ABRADER with comb attached. How warp ends are threaded into comb is illustrated in sketch below.

fied abrader as follows:

(1) One end through each heddle eye.

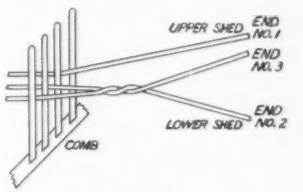
(2) Two ends through each dent in the reed, beginning with Nos. 1 and 2 through the first dent.

(3) Move heddles until No. 1 end is in upper shed. Place No. 1 end in No. 1 position on comb. Bring No. 2 end (which will be in bottom shed) up and over No. 3 end, then down and back to No. 2 position on comb. Place No. 3 end in No. 3 position on comb (see diagram). Continue this process until all ends have been placed in comb. The procedure leaves all except the two ends on the sides crossed between the reed and comb. Also the ends are spread out between the reed and comb because the reed contains two ends per dent and the comb one end per dent.

(4) All ends are pulled tight with the shed in the closed position and attached to a weight which experimentation has shown will not cause end breakage too early or will not require that the test be extended beyond 50,000 cycles.

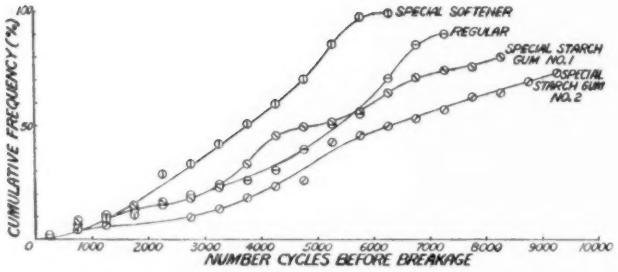
The reed and comb are marked so that four sets of thirty ends each may be abraded simultaneously and so that during subsequent testing the yarns may be threaded through the abrader in the same identical positions.

In operation the machine abrades the sized yarns in the heddle eyes, in the reed when adjacent ends pass during opening and closing of the shed, at the cross between the reed and comb during the beat-up motion, and in the reed due to the spreading out of the ends between the reed and comb. End breakage, which is recorded on a counter, occurs largely at the cross during the beat-up



stroke. These abrading actions are identical in some instances and comparable in other instances to the action of a loom.

Each set of ends is abraded at standard atmospheric conditions until 15 ends have broken. The machine is then stopped because the load per end increases in proportion to the number of breaks. When 15 ends have broken, the load per end has doubled. This increase in load does not compare with loom action but will not matter in that the test is comparative. The tester runs at 164 cycles per



GRAPH 1. Resistance to abrasion of 20s 100% viscose spun yarn, sized with a conventional starch gum sizing with regular and special softeners and with two experimental starch gum sizings. 60 grams load per end on modified Kendall abrader.

minute, requiring 61 minutes (not counting stoppage time) to make a run of 10,000 cycles.

The data are presented in the form of cumulative frequency curves[2] (see graphs). It is believed that these curves give the best form of presentation. Of equal value, but not as easily read, are cumulative frequency tables. As a first step in the preparation of frequency data, the total range of cycles is divided into from ten to twenty groups called class intervals. The size of these groups should be some value which is easy to work with and which is divisible by 2 because all values falling within a class interval are grouped together and represented as having broken at the mid-point of the class interval.

Any particular value in a cumulative frequency table is determined by adding together all the number of ends which have broken up to and including the class interval of which that value is the mid-point. The result is tabulated at the mid-point. These values are converted to percentage values by dividing the value by the total and multiplying by 100. Cumulative frequency curves are obtained by plotting the data in the tables.

One test of 15 breaks is not sufficient to properly represent the resistance to abrasion of a sample (see accompanying table). In the table each column toward the right contains data on 15 breaks more than was represented in the column immediately preceding it. Each addition of 15 breaks results in an appreciable change in the distribution until five separate runs have been added together, after which there is no appreciable change. The number of runs required will depend on the accuracy desired and on the variation of the yarn.

Practical Application. In comparing graphs, we examine the entire curve with special emphasis on the low range of the curve. Beyond a certain number of cycles, any further increase in resistance to abrasion would not produce an increase in weaving efficiency, but this value depends on many factors. Since yarn number, ends per inch, and loom speed must be considered, we have not arrived at a standard number of cycles for all styles and patterns.

We compare experimental formulas with our regular formula, and if any experimental formula appears to be better than the regular formula, we can place a large number of warps in the weave room for a more extensive practical trial.

Graphs 1, 2, 3, and 4 illustrate some of the uses of the modified abrasion test. Graph 1 illustrates a comparison of the regular mill starch gum formula on 20s/1 spun viscose yarn with: (1) special softener formula; (2) special starch gum No. 1; and (3) special starch gum No. 2. Size pick-up determinations and loom stoppage tests gave the following results:

Formula	% size pick-up	Loom stops per hr.
Regular starch gum	13.78	0.84
Special softener	16.39	2.94
Special starch gum No. 2	13.63	

Loom stoppage tests agree with the abrasion tests in comparing the regular starch gum size with and without special softener. The special softener increased the pick-up beyond the point for best weaving, and a decrease in abrasion resistance and weaving efficiency

RESISTANCE TO ABRASION
Modified Kendall Abrader
20/1 Rayon yarn, 60 grams load per end
Cumulative Frequencies, per cent

Mid-point of class interval, cycles	Run 1	Plus 2	Plus 3	Plus 4	Plus 5	Plus 6	Plus 7
250					1.3	1.1	1.0
750					1.3	2.2	1.9
1250					4.0	4.4	4.8
1750			2.2	3.3	6.7	8.9	8.6
2250	6.7	3.3	8.9	8.3	13.3	14.4	13.3
2750	13.3	6.7	17.8	23.3	26.7	27.8	29.5
3250	26.7	13.3	22.2	31.7	33.3	33.3	35.2
3750	33.3	20.0	33.3	41.7	42.7	43.3	44.7
4250	60.0	50.0	55.6	61.7	58.7	57.8	57.1
4750	73.4	60.0	62.3	66.8	64.0	64.5	63.8
5250	80.0	66.7	66.7	71.8	69.3	70.0	70.4
5750	86.7	70.0	68.9	73.4	70.7	74.5	74.2
6250	86.7	76.7	73.4	76.7	73.4	76.7	76.1
6750	86.7	76.7	73.4	76.7	73.4	76.7	79.0
7250		80.0	75.6	78.4	80.0	82.5	83.8
7750		83.3	77.8	80.0	84.0	86.6	87.4
8250		83.3	86.7	86.7	89.3	91.1	92.3

In contrast to the disadvantages of plant evaluation, tests on the abrader are all run on the same abrader by the same operator at standard conditions. Tests may also be made at different laboratory humidities and temperatures so as to study the optimum atmospheric conditions for any new sizing material. In conjunction with a laboratory size cooker and a small scale slasher, size formulas may be varied outside practical limits in order to arrive at the optimum size formulation. With this experimental set-up, different starches, synthetic size materials, and softeners may be evaluated without the danger of ruining large quantities of yarn.

Avondale Advertisement Sells 70,000 Fashion Garments

More than 70,000 ready-to-wear garments made of Avondale fabrics are reported to have been sold to the retail trade as a result of Avondale's first advertisement in the April 21 issue of "Life." In featuring both ready-to-wear and home-sewing fashions, Avondale's double-page, full-color advertisement, represented a departure from textile advertising convention, it is claimed.

The advertisement was said to have been scheduled for April 21 because the post Easter season marks the beginning of the cotton-selling season.

was noted. Regarding abrasion resistance, warps sized with special starch gum No. 1 were equal to warps sized with the regular starch gum. Warps sized with special starch gum No. 2 were slightly better than the regular warps. These results were confirmed by weavers' opinions.

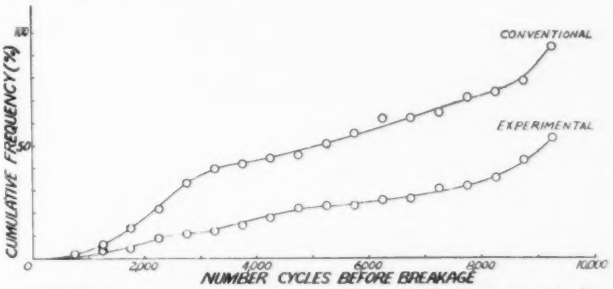
Graph 2 shows a comparison of 40s/1 combed cotton yarn sized with the regular mill starch formula. Again the abrasion test results are substantiated by weavers' opinions to the effect that the warps sized with the experimental starch were best.

Graph 3 illustrates the effect of package dyeing on the resistance to abrasion of 40s/1 combed cotton yarn (sized after package dyeing). This graph was included to show the possibility of other uses of the abrasion test. The graph indicates that apparently all bad warps are not caused by bad sizing. Certain lots or colors of package dyed yarns are harsh and have high surface frictional resistance which causes high tensions and excessive elongation during winding and warping. As a result, the yarn has low elongation and elasticity left for weaving. It is probable, though inconclusive, that certain dyestuffs may make the yarns harsh and that in some instances the proper amount of lubricant was not added after dyeing.

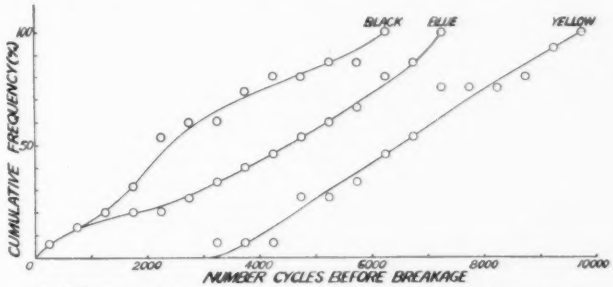
Graph 4 is a comparison of unsized 24s/2 100% spun viscose yarn with various blended 24s/2 yarns as indicated. Such tests will indicate the extent of sizing required by a specific blend. A blend of viscose and Dacron was also tested, but no ends had broken at 40,000 cycles.

The sized yarns represented in Graphs 1, 2, and 3 were sized on full scale plant slashers but, as mentioned before, yarn sized on small scale experimental slashers may be evaluated with the abrader.

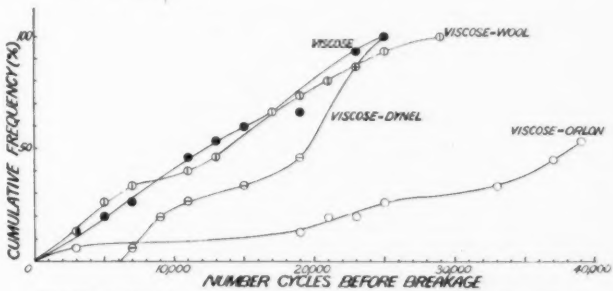
Acknowledgment. Grateful acknowledgment is made to R. H. Baker, Jr., Mooresville Mills, Inc., and Dr. J. P. Elting, Kendall Mills, for proof reading this paper.



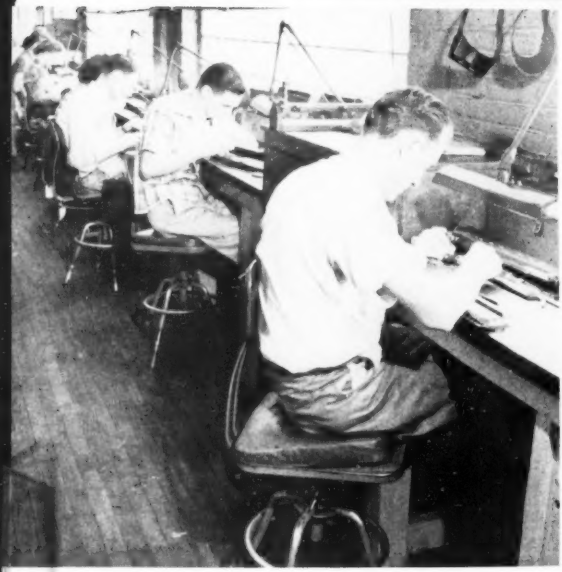
GRAPH 2. Resistance to abrasion of 40s combed cotton yarn sized with a conventional starch sizing and with an experimental starch sizing. 30 grams load per end on modified Kendall abrader.



GRAPH 3. Resistance to abrasion of sized 40s combed cotton yarn previously package dyed as indicated. 30 grams load per end on modified Kendall abrader.



GRAPH 4. Resistance to abrasion of various unsized 24s/2 synthetic blend yarns. 60 grams load per end on modified Kendall abrader.



ANY MILL producing 1500 dozen pairs per week or more should have its own needle and reconditioning department, especially on the finer gauges.

Fine Gauge

IN THIS era of 60 and 66 gauge full-fashioned machines the problems of the mill manager have increased twofold, the dominant factors being upkeep of machinery, maintenance of production, and retaining good quality. One might say all three factors are synonymous and so closely related that it is impossible to have one without the other.

There is no slipshod or haphazard method of operating the finer gauges successfully, for they are machines which require far more care and intelligent thought on the part of those who handle them than any gauge heretofore constructed. Everyone from the front office down to the operator should cooperate, and the failure of anyone along the line to recognize the fact he is dealing with something new and more intricate could well be the difference between efficient operation and chaos. After dealing with 54 to 66 gauge machines for the past six years I am firmly convinced that there is no substitute for patience.

It is my contention that 66 gauge machines are much more responsive to minor changes of any kind, and a minor trouble on a coarse gauge machine assumes greater proportions when it occurs on a 66 gauge machine. The methods used in obtaining and holding excellent quality on the 66 gauge might well apply to 60 and 54 gauge. At Beautiful Bryans Inc., all knitting machines receive the same treatment.

As a starter, needles are bench or hand pliered before they are placed in the machines, and although this may seem costly, it pays off in terms of less menders and better fabric. Furthermore, a good bench needle operative is far superior in needle straightening and squaring in three years than the average knitter is in a lifetime.

Bench pliering also assures that all needles go into the machines as nearly alike as humanly possible; whereas on three shifts each operator straightens needles differently, which can ultimately cause a great variance in the needles in the head.

Bench operatives use a gauge to establish the proper height of the beard, but the average knitter does not know what this height should be. Operators on piece work try to produce the maximum number of dozens, and by helping them it is possible to help yourself.

On 66 gauge work we would all be in a better position to produce finer hosiery if we had a lighter weight yarn, such as 10 or 12 denier. As it now stands, every little misalignment will make a streak on the 15 denier stockings. We find it necessary to overhaul about every two years under present circumstances.

Our needle department is of utmost importance. Without a needle department our hosiery would be of inferior quality. We definitely stress quality in preference to production, and though this is more costly it is a must which should be considered to the fullest extent.

Although 60 gauge machines do not present as great a problem as 66 gauge machines, the fact remains that it costs more to operate and maintain fine gauge machines than those of coarser gauges. We should bear in mind that the 60 gauges in operation are comparatively new, and durability is a factor which has not been established.

I have already heard rumblings about needle beard wear, and in some instances wear on both the needles and sinker heads has evoked complaints.

In view of the fact that the thickness of the beard has been reduced and the press edge of the sinker head is narrow on the finer gauge machine, more trouble is to be expected. Mills must become accustomed to the new machines, and provisions must be made for the extra cost of upkeep before it is too late. The finer gauges cannot be operated in the same manner as the coarser gauges from 51 on

Sound advice for full-fashioned knitters....

Machines Require Better Upkeep

Some problems confronting mills with 60 and 66 gauge machines: how the Optical Comparator may be used to help pin-point their troubles.

By CHARLES O. SIMMS
Superintendent, Beautiful Bryans, Inc.

down. The full-fashioned business is faced with new problems which are going to take a lot of study and work to overcome.

Although some mills may not be as finicky about streaks as we are, the fact remains that when streaks develop something is out of line or worn. Everyone should know the causes of streaks, which are a plague to all of us, but elimination is cheaper at the outset for it may bring to light trouble which is developing on other machines.

In one mill, every time a knitter replaced a needle a streak appeared in the stocking. The manager of that mill sent us some needles which we placed in our "Optical Comparator" and magnified the beard fifty times its normal size. The beard on some of these needles had worn .0045", or more than one half as compared to a new needle.

When the mill manager was informed of the needle wear, he checked and found that the sinker heads were worn to the extent that there was barely enough press edge left. This led to further inspection of the machine which ultimately cost in the neighborhood of $5000.00 to overhaul.

Upon analyzing the situation it was finally determined that the knitters on this machine had not been using needle oil in the sinker head *after* the application of nylon size remover. This is very important, and although the mill still has some wear on the needle beards, the sinker heads show only normal wear. Size remover should be used cautiously and should *always* be followed by oil.

It is only natural to contend that the most obvious place for needle beard wear to occur is when the needle is at full press against the sinker head. It is quite possible the alloy used in making the sinker heads is responsible for this wear because the beard is the only part of the needle that eventually fails.

On one occasion I was asked why it is that one machine will show more wear than its mate. Theoretically, the answer is that the sinker heads may have been made with a variation in the alloys used. This is quite possible and the difference does not become noticeable until the machines have been put into operation. Foundries may make mistakes, and in this instance the mistake is of serious nature.

At another time I was asked why the needle beards and the sinker heads both showed signs of wear. The answer may be that in these particular sinker heads there was too much of one thing and too little of another.

If every mill worked over its sinker heads during an overhauling it would find a difference in the hardness of the press edge even from heads from the *same* machine. A Comparator may be used to determine which sinker heads have caused the most wear in relation to the needle beards. Usually, those heads of flintlike hardness are the biggest culprits, some of them offering severe resistance to filing. What chance does a needle beard have under these conditions? Something is going to wear and the beard has the least resistance, receiving more punishment than any other part of the machine when one considers its diameter and the pressure exerted upon it with every course of the machine.

Let us not forget it is cheaper to replace needles than sinker heads, for when the latter are no longer serviceable the expense is terrific.

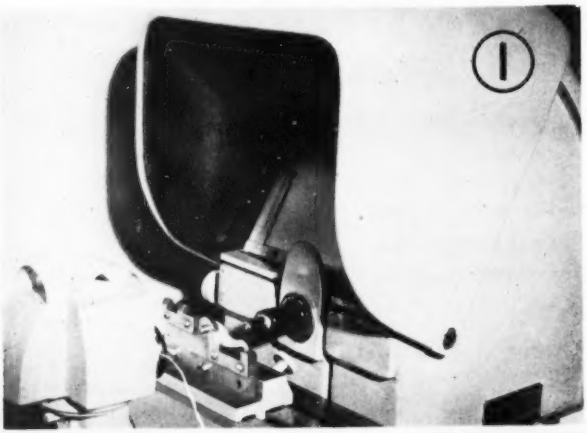
To see how the Optical Comparator is used in one mill, turn the page ➡

IMPORTANT dimensions of needles, sinkers, and other critical parts of knitting machines may be easily and accurately measured by a layman, provided adequate equipment is available. For this an Optical Comparator and Measuring Machine may be used.

The Comparator is an optical bench machine in which a powerful light and combination of lenses throw a highly magnified image of

a part or object upon a translucent screen. The machine shown in the accompanying illustrations provides a magnification of 50X.

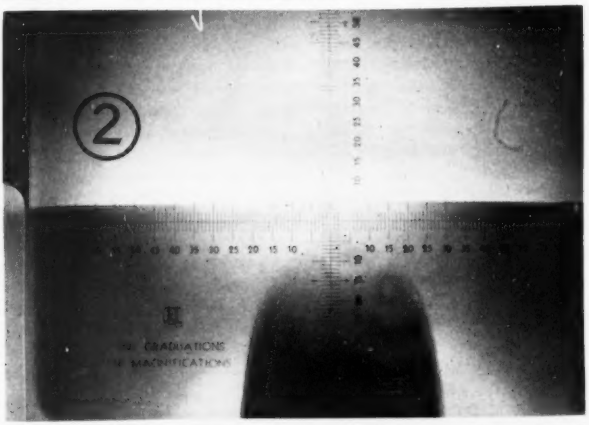
The Optical Comparator was placed on the market more than 25 years ago; however relatively few knitting mills are equipped with such machines. The Comparator offers a practical and positive means to determine the causes of many production problems en-



THIS OPTICAL COMPARATOR magnifies small knitting machine parts 50 times. In the jig is a full-fashioned machine jack which is be-

Comparator

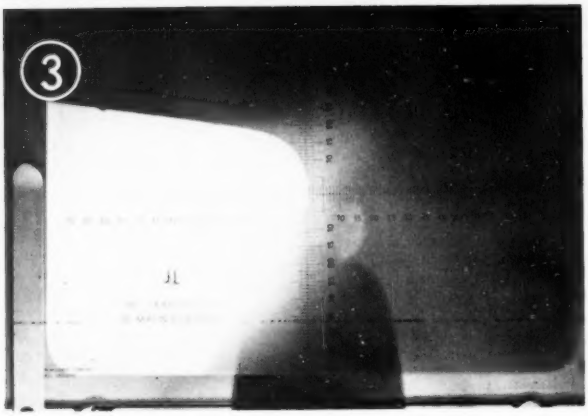
ing tested for the proper depth at the point where it contacts the slur cock in the coulier motion.



CONTOUR of the jack may be seen in this view of the Comparator screen. Shadow cast upon the screen shows that the jack has the correct

Jack

dimensions. Note that the shadow is in line with the top of the square. An error of .001 either way would mean that the jack does not have the proper depth.



CALIBRATED IMAGE shows a sinker which may be classified as "usable." The Comparator permits easy measurement from the inside of the butt to the throat, or from the backside of the butt to the throat for overall length. If sinkers are too long or too short, streaks may be made in

Sinker

the stockings, but by measuring the sinkers before they are put into the machine, the streak hazard from sinkers is eliminated. Although sinkers are made according to established standards, we have found some as much as .003" too long or too short. The factory spot checks—the mill should check all parts.

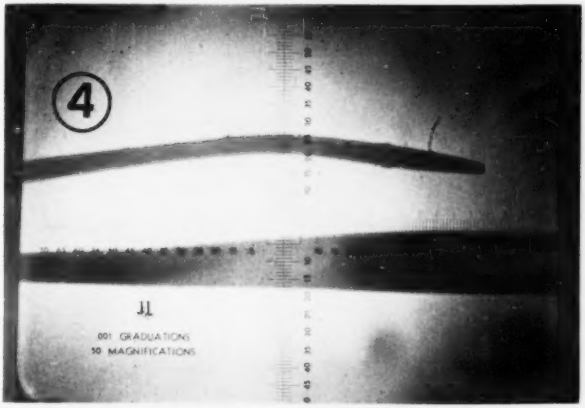
countered on modern fine gauge knitting machines.

Many parts of a knitting machine are difficult to measure mechanically; however if magnified 50 times on the Comparator they may be easily measured to determine differences in contours and dimensions. The illustrations depict several practical uses of the Comparator as employed in one full-fashioned knitting mill.

NEW 60 GAUGE NEEDLE as it appears on the Comparator viewer. The needle was sent to us by a friend who does not have a Comparator, and he thought his machines were running with comparatively little needle

New Needle →

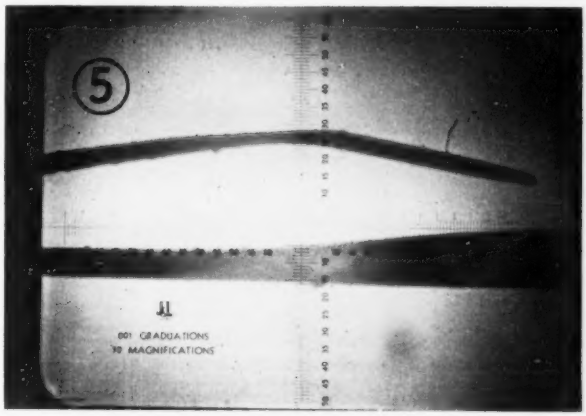
wear at the beard. Getting the correct facts is important in operating a full-fashioned mill efficiently. The next photo shows what can happen when the facts are not known and everything appears to be running satisfactorily.



NEEDLE BEARD WEAR shows up on screen. Our friend extracted some needles from one of his 60 gauge machines, and upon placing them in the Comparator we found the beard had worn about .002". Upon further inspection it was determined that all beards in this machine were wear-

Worn Needle →

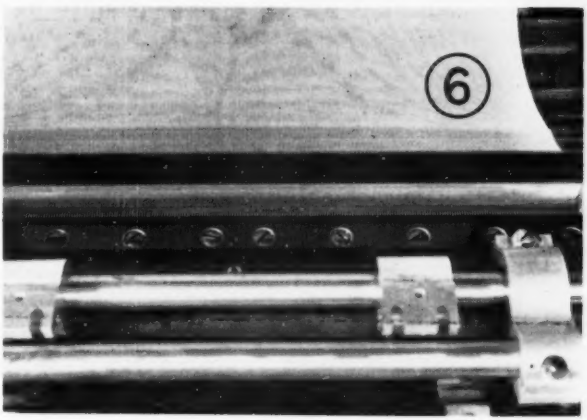
ing, and the needles were only 11 months old. Obviously the machine would need new needles in a short time—but at least the mill officials were aware of what was taking place.



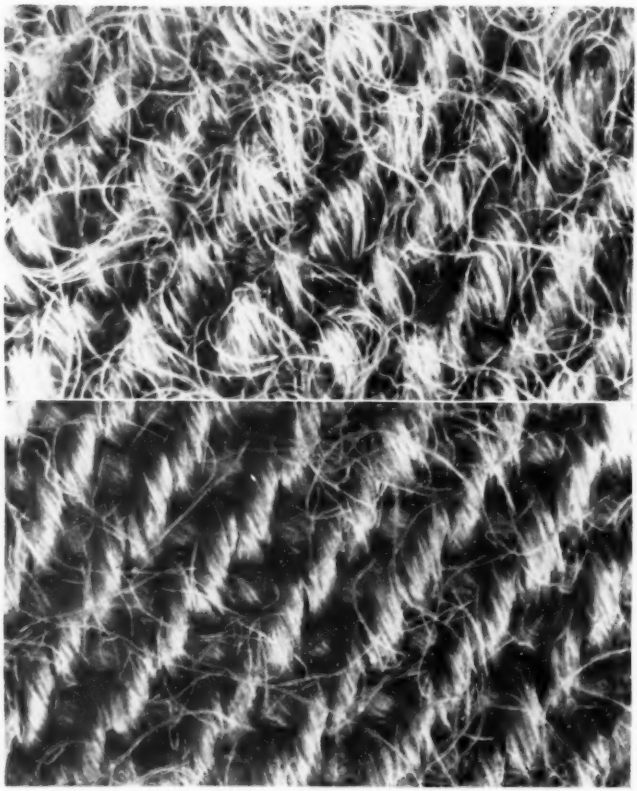
NEEDLE BAR at full press, showing the exact position in which the beard wear takes place. Further investigation revealed that other mills were having needle beard wear regardless of what brand of needles was used. Also, some machines were wearing out the needles more than others, and some heads were wearing more than others on the same machine. In one plant needle beards wore out in seven months—a serious situation. About 60% of the mill operators who discussed the matter agreed that the

Needle Bar →

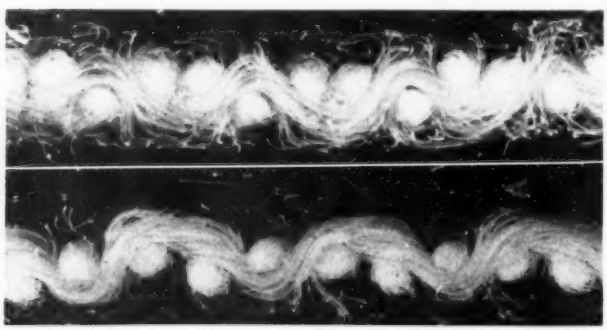
difference in the alloy used in the sinker heads could be the cause of the trouble. The beards on some machines wore out sooner than on others of the same vintage, a fact which seemed to substantiate the opinion. It was also discovered that where the beards did not wear, the sinker head did. The problem is important, and the sooner a solution is found, the sooner everyone will start saving money.



What Happens to Viscose Fabrics



PHOTOMICROGRAPHS OF FACE of untreated viscose rayon fabric (upper photo) and X-2 treated viscose rayon fabric (lower photo) after 20 washings. Warp is vertical. Magnification of all photomicrographs on these two pages, 25.



CROSS SECTIONS OF FILLING in the warp direction of untreated viscose rayon fabric (upper photo) and X-2 treated viscose rayon fabric (lower photo).

COMPARISONS of photomicrographs show that yarns of X-2 treated cloths are uniform and compact, that treated fabrics shrink less from washing and are free of the nap so conspicuous on surface of untreated fabrics.

IN TESTS that it has conducted of its recently announced X-2 chemical treatment for viscose rayon and rayon blend fabrics [pages 117, 129, TI for January, 1952], the research and development division of Dan River Mills has established with scientific accuracy some of the changes produced in such fabrics by this treatment.

The tests were made with identical swatches of the same spun-viscose fabric, one swatch untreated and the other treated with X-2 chemical. Both samples had been subjected to repeated launderings.

Photomicrographs of the surfaces of the two fabrics, and of cross sections warpwise and fillingwise, were made on a magnification of 25 for all samples.

These photomicrographs, reproduced herewith, show the changes, after washing, in the surface appearance and in the general structure of rayon fabrics brought about by the X-2 treatment.

The surface pictures show outstanding differences in the amount of "free fibers," or nap, on the untreated versus the treated fabrics. The treated fabric shows that the yarns remain uniform and compact, the twist direction being much more obvious.

The photomicrographs of warp and filling cross sections taken from these identical untreated and treated fabrics confirm and explain the surface difference. The yarns in the treated fabric shown in cross section are more dense and compact, with less flying fiber.

The treated fabric shows only a

Treated With Dan River's X-2

By L. K. FITZGERALD
Manager, Research & Development
Dan River Mills, Inc.

slight amount of nap. The yarns of the untreated fabric are more open, with much "free" and flying fiber that gives a napped appearance and prepares the way for extensive abrasion in wear and washing.

It is also apparent that the treated fabric has shrunk less, in that its yarn cross sections in both directions are farther apart than is the case with the untreated fabric, and have not been shrunk together by the washing process.

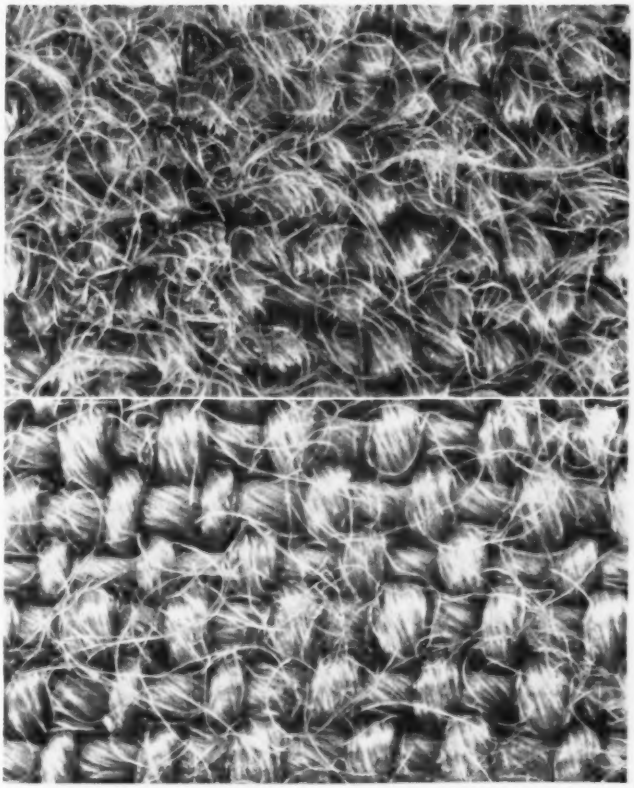
Quantitative measurements of the photomicrographs show 20 per cent more shrinkage in the untreated fabric over the treated fabric.

There is no mystery as to how the X-2 treatment brings about such changes in the surface of the rayon fabric. The cross-linkage set up by the X-2 chemical binds the cellulose molecules within each fiber so that much less water can penetrate and swell the fibers than is the case with the untreated fibers.

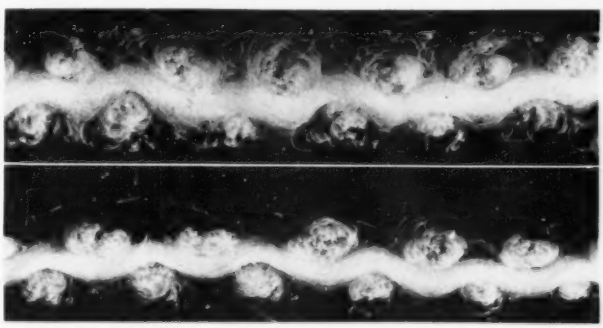
Consequently, when the treated fabrics are washed the fibers do not become swollen as do the untreated fibers.

The swelling of the fibers of untreated fabrics, especially those on the surface, causes these fibers to be easily abraded on washing so they rise above the surface and become "free fibers," thus producing the nap so noticeable on the surface of the untreated fabric.

Since the cross-linkage in the X-2 treated fibers is permanent for the life of the fabric, there is little napping of the fabric through repeated washings, or through wear.



PHOTOMICROGRAPHS OF BACK of untreated viscose rayon fabric (upper photo) and X-2 treated viscose rayon fabric (lower photo) after 20 washings. Warp is vertical.



CROSS SECTIONS OF WARP in the filling direction of untreated viscose rayon fabric (upper photo) and X-2 treated viscose rayon fabric (lower photo).

and this factor contributes heavily to the longer wear-life of the treated fabric.

Further, this resistance of the treated fiber to swelling by water establishes a very definite resistance to embedded soiling, in this way: Soiling of the surface of the treated fabric in wear may occur, but since the soil cannot penetrate the fibers, even though water-borne or moisture-borne, all such soil remains on the surface of the fabric and may be easily removed.

The same factor prevents absorption by the fibers of odor-forming perspiration, and it greatly shortens the drying-time of treated fabrics after laundering.

These photomicrographs confirm all of the standard tests as to the shrinkage control established by the X-2 chemical. Initial shrinkage of the treated fabric runs less than 2 per cent by the standard tests, and there is practically no progressive shrinkage from repeated washings. The standard 20-wash cotton test has shown this consistently with all X-2 fabrics.

Electromagnetic Card Comb Drive Under Test

American Engineering Corporation, Atlanta, Ga., (a group, headed by Ben Comer of Comer Machinery Co., which explores through research methods the devices and ideas which are thought to have practical application in the textile industry) sometime ago constructed a model of a vibrating magnetic drive for card combs and then engaged Southern Research Institute, Birmingham, Ala., to redesign the device and test it on an operating card.

The drive, as built by American Engineering Corp., employed a magnet which, when energized, exerted a force on the comb structure which caused it to be deflected. A spring was attached to the shaft to tune the oscillating comb structure. It was decided that the comb should vibrate at a frequency of 1800 cycles per minute, since this frequency is a sub-multiple of commercial power frequency (60 cycles per second) and also approximates the speed of mechanical drives. To accomplish this, American Engineering Corporation used an electronic frequency divider-rectifier to supply 30 pulses per second (1800 per minute) to the magnetic coil. The entire unit, including comb blade, supporting structure and spring, was so adjusted that its natural frequency of vibration would permit the comb blade to travel an adequate distance at 1800 cycles per minute. The structure holding the blade was mounted in bearings at each end.

In redesigning the card comb drive, Southern Research Institute engineers decided to eliminate both the electronic frequency divider and the bearings, in order to reduce maintenance problems as much as possible.

The electronic frequency divider was eliminated by a redesign of the magnetic structure. The magnetic structure designed by Institute engineers allows magnetic force to be exerted on the armature in both directions of the comb blade's swing at 60 pulses per second, thereby producing 30 complete vibrations of the comb blade per second. Elimination of the original electronic frequency divider-rectifier permitted use of a long-life dry type rectifier.

The mechanical structure supporting the comb blade in the new model is held stationary in rigid mounts and the blade is attached to the structure by flat leaf springs. The blade can thus vibrate from a stationary support.

The elimination of bearings at either end of the comb drive reduced the number of wearing parts, and no oiling is necessary. It was necessary to select springs which give the blade a natural vibrating frequency of 1800 cycles per minute. Since the driving magnet exerts a force at this same rate, a resonant condition is reached and large amplitudes of vibration can be attained. The comb blade travels slightly more than one inch, approximately the same distance as in conventional combs.

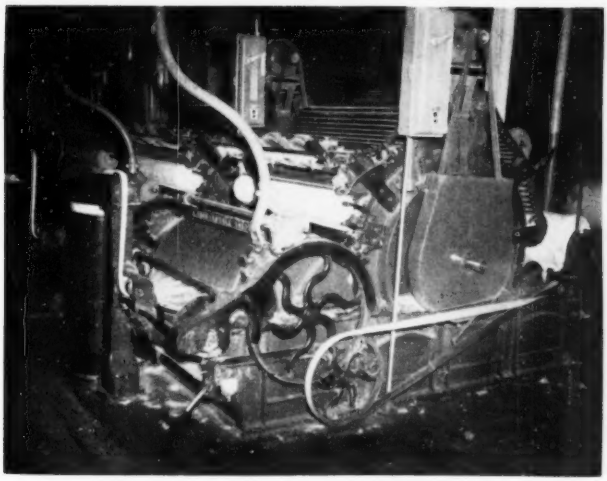
Three models of the new comb drive have been constructed in the Institute's shop. One of these has been tested on an operating card and works quite satisfactorily. Further testing will be carried out to establish the reliability of the new design before the sponsor begins manufacture.

Apparatus Evaluates Warmth of Textiles

A new apparatus for measuring the warmth properties of cotton and of other textile fabrics, promises to be useful in commercial application as well as in research to improve the utilization of cotton, according to the U. S. Department of Agriculture.

The warmth value of a fabric is usually rated by determining the difference in energy required to maintain a warm body at constant temperature in cold air when uncovered and when covered with test material. The apparatus developed at the Southern Laboratory applies this same principle, but instead of testing in still air the fabrics are subjected to a simulated wind along with low temperatures.

A metal "arm" clothed in a sleeve of the test fabric is lowered into a commercially-made home freezer in which a fan has been installed to maintain a wind velocity of 12 to 13 miles an hour over the surface of the fabric. This combination of wind with cold temperatures, which can be adjusted as desired, is said to provide a better means of evaluating fabrics under conditions similar to those prevailing in Arctic regions.



- ***Minimum floor space***
- ***Maintenance negligible***
- ***Downtime minimized***
- ***Uniform speed***
- ***Improved cleanliness***

Limestone Manufacturing cites

Advantages of New Card Drives

Staff Prepared

LIMESTONE Manufacturing Company, (a division of M. Lowenstein & Sons, Inc.) in Gaffney, S. C., now has a new type of individual drive on 149 cards. The first of these drives was designed and installed about two years ago by Earnhardt Electric Service, Inc., Spartanburg, S. C., and according to W. R. Frye, overseer of carding, the drives have proved their value in several ways.

One of the most obvious advantages of the installation is the saving in floor space. Eight cards now occupy the same floor space required for seven belt-driven cards. The cards are set with the base plates just 26 inches apart, which leaves enough room for a man to get between them, but there is no wasted space at all. If line-shaft belt-driven cards were set this close, it would be impossible to go between them without considerable hazard while they were running.

These cards are driven by three V-belts, which are covered by a guard over the card's driven pulley. Power is delivered by a 1½ hp, Westinghouse, lint-free motor, mounted on a special adjustable pedestal which holds it in position above the card. This pedestal is hinged at one end and equipped with two adjustment screws at the other. These screws make possible easy and accurate adjustment of belt tension.

No changes are made in the card except the substitution of a V-belt pulley in place of the usual flat drive pulley.

Another obvious advantage, which is common to all types of individual drives, is the fact that motor failure affects only one card instead of all cards on the line shaft.

Mr. Frye particularly likes these drives because the belts do not require much attention or any dressing, but give constant speed and therefore constant output without lost time for belt care. Furthermore, there is no danger of getting belt dressing in the stock.

Reversing the drive for grinding is simple. There is a reversing switch in the Westinghouse dust-tight combination controller, and the motor will change direction at the flick of the switch.

Limestone has had almost no maintenance work in connection with the drives. During the two years of operation, only three outboard motor bearings have proved defective and have had to be replaced. The mill has also learned that it is necessary to keep the proper tension on the V-belts in order that the Thermoguards on the motors will act properly and promptly. The purpose of the Thermoguard is to cut the motor off automatically if the card chokes up or if there is any undue strain on any moving parts. Ordinarily, the V-belts have been stretched their limit after two adjustments.

These drives have been installed, at Limestone Mfg. Co., on three different models of cards—Saco-Lowell, Whitin H, and Whitin L—and they give equally good service on all.

The cards in this mill are operated at 168 rpm, on SLM, 1 1/32-in. cotton.

Instruments Speed Wool Research

Staff Report

PICTURED on the opposite page is some of the equipment briefly mentioned in TEXTILE INDUSTRIES' report of the Wool Bureau's Research Seminar at Lowell (May, pages 122, 123, and 125; space limitations precluded publication of these photos in that issue).

Some of the apparatus developed in the course of the International Wool Research Project investigation might become standard in the mill laboratories. If so it is likely to provide access to more data on the chemical, physical, and morphological properties of wool fibers, while facilitating study of their mechanical behavior in every phase of wool processing.

Background of the Project. The wool study covers a comparison of wools of similar type obtained from widely varying geographical origins. Four primary wools are included: Fine Australian, Fine Domestic, Medium Domestic, and Medium New Zealand. These wools were subjected to numerous physical and chemical tests as they were received and as they passed through the various manufacturing processes of a typical French-type spinning mill.

From grease wool to finished serge, under careful chemical and engineering controls, their performances through scouring, carding, combing, drawing, spinning, weaving, dyeing, and finishing were under constant observation by mill experts.

Sponsors of the Project. Sponsors of the International Wool Research Project are: The Wool Bureau, Inc., acting for the American Wool Council and the International Wool Secretariat; U. S. Department of Agriculture; Office of Naval Research, Navy Department; and the Wool Trade Association.

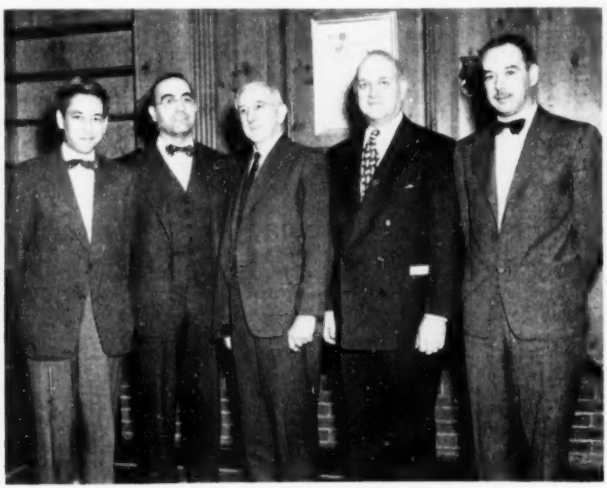
American firms participating in sponsorship of the project include: Artloom Corp.; Bachmann Uxbridge Worsted Corp.; Appleton Woolen Mills; Sidney Blumenthal & Co., Inc.; Forstmann Woolen Co.; F. C. Huyck & Sons; A & M Karagheusian, Inc.; C. H. Masland & Sons; Mohawk Carpet Mills, Inc.; Monsanto Chemical Co.; Scholler Brothers, Inc.; Alexander Smith, Inc.; M. T. Stevens & Co.; Talbot Mills, Inc.; and Wyandotte Worsted Co.

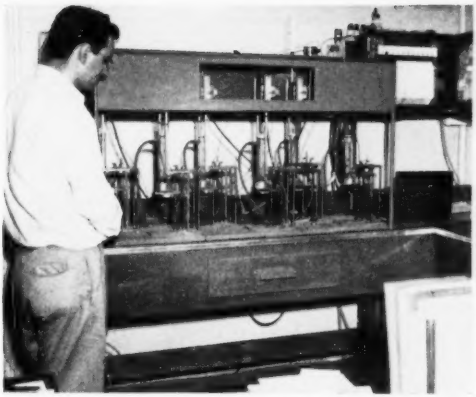
Contractor for research is Textile Research Institute; subcontractor, Forstmann Woolen Co.

Now Under Study. (1) Relationship of the processing characteristics of the four master wools to with-scale and anti-scale friction. (2) Relationship of the physical properties of wool fibers to their chemical structure. (3) The effects of chemical modification and treatment upon wool fibers. (4) Examination of the effects of steaming in reducing the aging period required for efficient processing.

WERNER VON BERGEN, director of research, Forstmann Woolen Company, disclosed the part his research group had in the findings of the project.

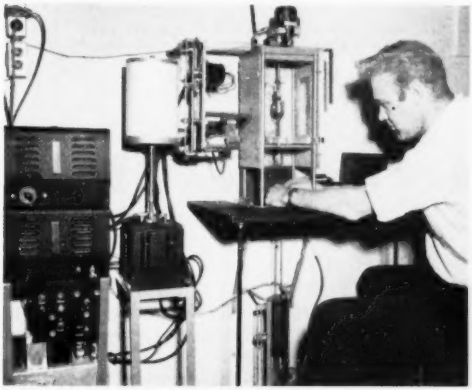
MILL REPRESENTATIVES were present for the three-day Wool Research Project Seminar. Left to right, Fritz Kobayashi, Ames Worsted; Levon Yacubian, Barre Wool Combing Co., Ltd.; Herbert Ball, Lowell Textile Institute; Albert Gilet, Gilet Carbonizing Co.; Fred Gatenby, Abbot Worsted Company.





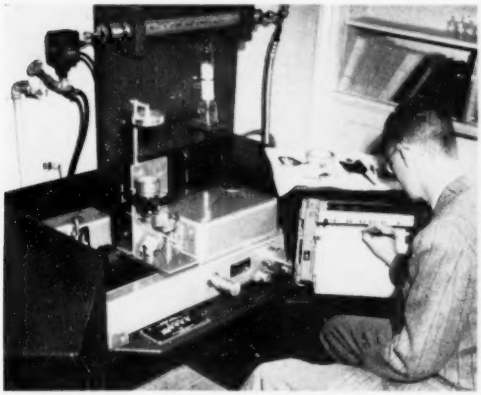
STRESS RELAXATION APPARATUS is used to study the reaction rates of chemical changes in wool. Schaevitz linear differential transformers are used.

INSTRON TENSILE TESTER is used to determine two-dimensional stress-strain properties of fabrics. Special jaws permit equal stretch in warp and filling.



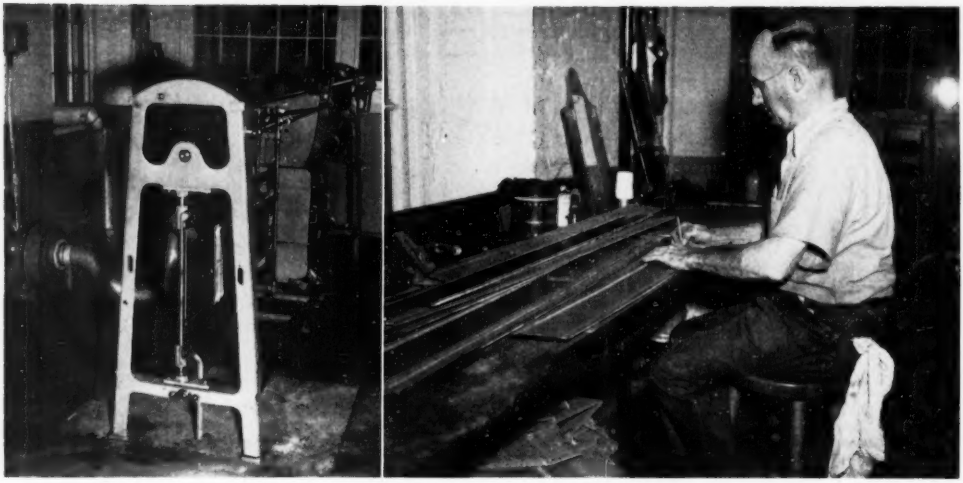
TRI FIBER TESTER, developed in connection with long range studies of single fiber mechanical properties, is operated regularly in the Institute's lab.

ELECTRONIC INSTRUMENTS, used in determining the amount of radioactive material absorbed by wool fibers, permits tracing a chemical reaction.



INFRA-RED RECORDING SPECTROPHOTOMETER is equipped with a reflecting microscope for determination of infra-red spectra of single fibers.

VIBROSCOPE determines effective cross-sectional area of single fibers by measuring vibrational frequencies. Cross sectional area is related to resonant frequency.



THE "ROBOT" (left) reconditions reeds and heddles at Paul Whitin Mfg. Co. Reed and heddle maintenance begins at the repair table (right). Bent wires are straightened, and damaged wires are replaced. The next step is automatic brushing and honing on the "Robot."

Rayon Plant Mechanizes Reed

- ***18,000 heddles cleaned in 8 hours***
- ***Reed cleaning simplified***
- ***Investment amortized in 6 months***
- ***Labor of two men saved***

Staff Prepared

3,600,000 is a large number, large even in these days of deficit spending in Washington where large numbers are the vogue. That's the number Henry G. Carse, general superintendent of Paul Whitin Mfg. Co., gives for a rough estimate of heddles on looms in this Massachusetts rayon plant.

Add to this the several hundred thousand heddles carried in inventory and the reeds for 600 looms, and you've got an impressive figure. Each of these items can be procured at small cost, but the total investment they represent has a marked influence on the cost of production.

Twenty-four hours a day, the heddles and reeds are in continuous motion, being abraded by warp yarns, picking up size and lint, and rusting in the humid, corrosive atmosphere of the weave room. Adequate measures have to be taken to protect the parts, clean them, repair them, keep down replacement costs, and keep up loom efficiency. Reed and heddle care has a role of major stature in Whitin's overall maintenance program.

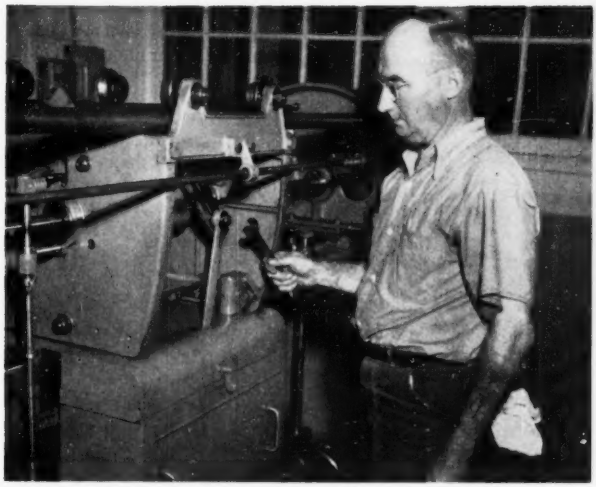
At first, Whitin met the problem by assigning a small crew to reed and heddle care. Two operatives were delegated to the laborious task of hand cleaning heddles, and a third operative concentrated on honing and repairing reeds. The effort barely showed results. None of the operatives ever caught up with a continually increasing backlog of work.

Naturally, cleaning intervals became more extended. Time took its inexorable toll, and huge quantities of reeds and heddles steadily deteriorated, some beyond repair.

The slow, tedious progress made in cleaning heddles and reeds was reflected by weave room efficiency. Knock-offs and poor quality work could be traced directly to improperly serviced reeds and heddles.

This was the situation until Mr. Carse installed an automatic, precision-built reed and heddle brushing machine. Manufactured by Vollenweider in Switzerland and sold as the "Robot" in the United States by the H. J. Theiler Corporation, the machine cleans, hones, and polishes reeds, as well as heddles while mounted in the harness frames or when dismantled.

The brusher accelerated cleaning to such an extent that it displaced



THREE ADJUSTMENTS adapt the machine to any kind and condition of reed or heddle. The operator is shown adjusting the brush stroke, which depends upon the height of the heddle.

and Heddle Cleaning

two operatives, and now requires the part-time attention of the remaining operative who is able to devote more time to reed repair. On this basis alone, the machine paid for itself in six months.

Description. The brusher is 85 inches long and is driven by V-belt from a 1 hp motor. The motor compares in size with 2 hp conventional motors, is air-cooled, and though compact, has an insignificant rise in temperature at full load performance.

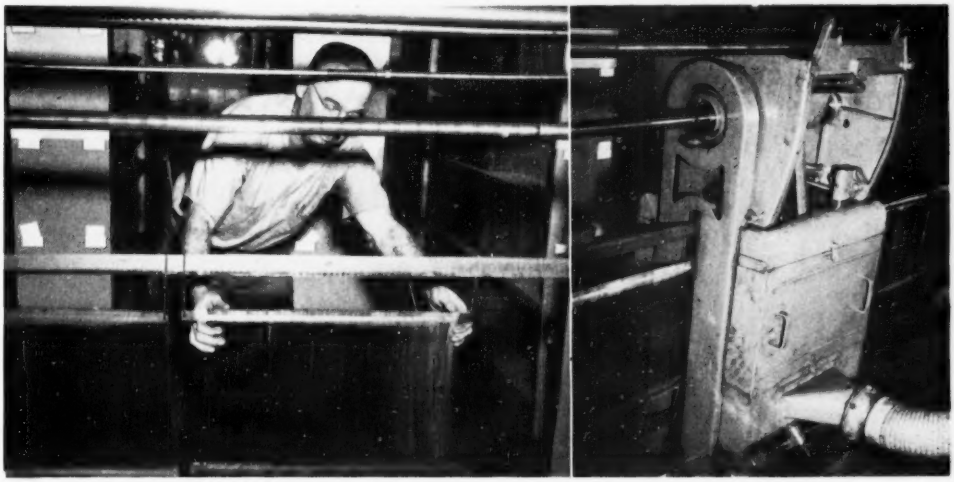
Reeds longer than 85 inches can be inserted in one end of the brusher and cleaned in increments. Shorter reeds can be accommodated up to the full length of the machine.

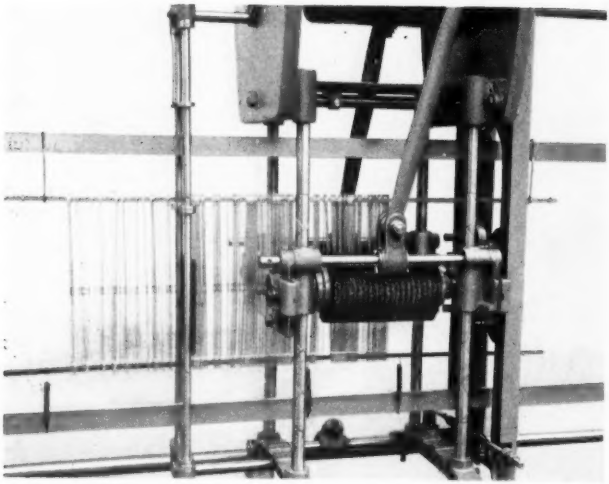
The reed fits in the grooves of two horizontal bars which are positioned by handwheel. Harnesses or heddles are also fastened to the same bars. Two four-inch diameter rotary brushes, each 12 inches long, straddle the item being serviced. A carriage (holding both brushes and their gear drive) slowly traverses the length of the machine, reverses, and returns to the starting point.

During the lateral passage, the brushes rotate at 1200 rpm while oscillating up and down in rapid strokes. The length of stroke is adjustable from 1½ to 13¾ inches, depending on reed or heddle height.

The condition of reed or heddles determines the number of lateral cycles necessary for a satisfactory refinishing job. The cycle desired is preset on a dial calibrated from

HEDDLES OR REEDS may be mounted between horizontal bars (left). Distance between mounting bars is easily adjustable to accommodate different reeds or heddles. 6000 heddles may be cleaned at one time. Heart of the machine (right) is a fully enclosed carriage containing brushes.





BRUSHES STRADDLE HEDDLES mounted in carriage, shown here with covers removed. Brushes oscillate up and down while carriage traverses length of machine. A honer can be attached to the carriage. Burrs, nicks, and rust are removed by pumice stone clamped in the honer.

one to four. After the required number of passages is completed, the brusher automatically stops.

Brushes and brush drives are enclosed in a cabinet equipped with an exhaust port to which is attached a conduit to the outside of the building. A ½ hp fan evacuates brushing refuse. Despite the vigorous brushing action, no dust exhausts into the room.

Two types of brushes are used on the machine. A horse hair brush cleans down average dirty reeds or heddles. A bronze wire brush is employed when more thorough cleaning or rust removal is necessary. The brushes are mounted on easily exchangeable ball bearing axles. Actually, the brushes are spiral wound fillers held in place on a grooved metal cylinder by two flanges.

RECONDITIONED REEDS are dated and stored in bins until they are needed.

At Paul Whitin, the bronze wire brushes are used almost exclusively. A large portion of this mill's heddles and reeds are slated for rejuvenation and salvage. Just as soon as the parts are in satisfactory condition, the mill will revert to the gentler cleaning action afforded by horse hair brushes.

A reed-honing attachment adds to the machine's versatility. Independent of the rest of the machine, it consists of two symmetrical stone holders fixed in place by two nuts. The stones polish both sides of the reed simultaneously. Stones are removed when the machine is brushing heddles.

Reed Cleaning. Before reeds are cleaned, they are repaired on a work bench several feet away from the machine. Here, bent wires are straightened and broken dents patched.

Then, the reeds are bronze brushed in two complete traverses of the brush carriage. It takes about 20 to 25 minutes to complete the two cycles. At the same time rust is being removed, size particles and dirt deposited between dents are extricated, and a fine polish results. A high-speed short brush stroke is used for the reeds. Heavily rusted reeds are sometimes soaked overnight in a rust solvent solution.

If the vertical edge of the reed is damaged, either by rust or from some minor mechanical cause, it is easily repaired on the machine. The reed is dry honed with pumice stone in one or two back and forth motions and then given a final honing action with linseed-oil-saturated stone.

A carborundum stone is used when the vertical edges are badly damaged such as might result from a shuttle smash. This is followed by honing with an oiled pumice stone.

Cleaning Heddles. Normally, two or three back and forth motions of the brushing carriage are necessary to clean heddles contaminated with heavy deposits of size. These heddles are first soaked in Immunol No. 1066 overnight.

Heddle cleaning has been stepped up to a mass production footing at Whitin. The mill finds it economical to clean 6000 heddles in one operation. Heddles are slipped off harness frames onto specially prepared frames which are two feet long and hold 1500 heddles. Four such frames are inserted into the cleaning machine at one time. In this way about 18,000 heddles are cleaned in the course of a normal eight-hour day.

Although the heddles are compactly assembled on the frame, they have sufficient play to allow brushes to reach every portion. Even the heddle eyes are given a fine polish. Thousands of heddles, which ordinarily would be discarded, have been rejuvenated as good as new.

The operating schedule calls for cleaning reeds for several consecutive days, and then switching to heddles. Alternating in this manner obviates the need for too frequent readjustment of the traverse

(*Continued on page* 192)

Nothing Goes to Waste

at Alexander Smith's Yonkers' plant

Even the dust removed from the carpet wools is salvaged and sold for use as fertilizer.

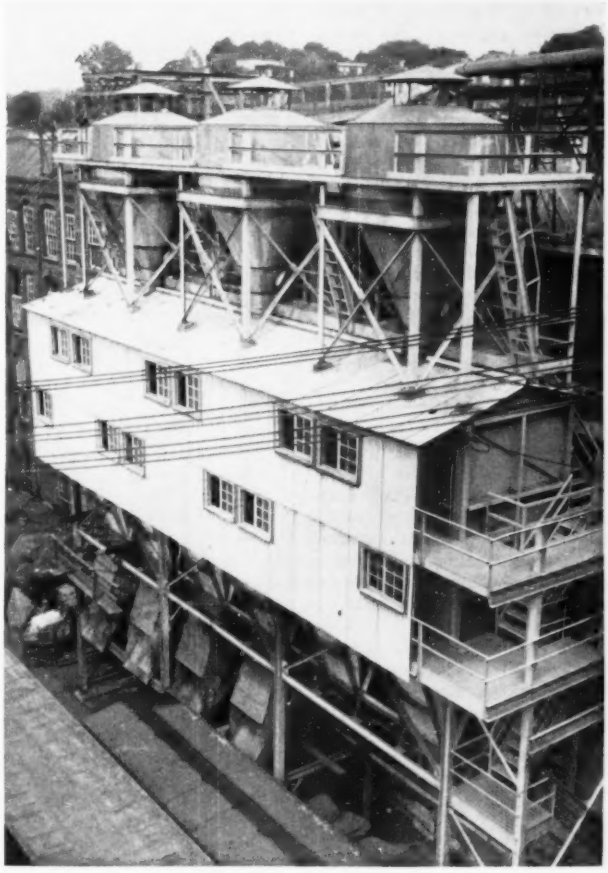
Staff Prepared

THE STRUCTURE shown here is a three-compartment silo for storing wool dust blown from the opener room of Alexander Smith, Incorporated, Yonkers, N. Y. This mammoth dust silo has an 80,000 pound capacity, takes about three weeks of normal production to fill, and can be emptied in short order by means of chutes leading to a railroad siding.

Two major benefits stem from the silo and its related dust collection system. The first one is monetary. Every ounce of dust beat out of the wools during opening operations is salvaged and sold as fertilizer. The second is sanitary. The unhealthy, dusty atmosphere usually prevalent in opener rooms has been eliminated.

Previously, a single roof-top collector connected by conduits to the processing units below gathered in the waste. The old collector couldn't cope with the volume of dust processed. Furthermore, dust removal and handling was complicated by the relatively inaccessible location of the collector.

Now, a generous supply of perforated drum condensers shares the burden of dust removal with the burr pickers, shredders, openers, and dusters. Even the sandiest, driest India wools are efficiently aired and dusted. The refuse is exhausted to several roof-top collectors and propelled by a booster to the silo. At this point, what once was waste becomes a valuable by-product obtained efficiently and at low cost.



SILO FOR WOOL DUST storage at Alexander Smith's Yonkers, N. Y., plant. Note chutes at bottom for dumping dust into rail cars.

How Ginning Practice Affects the Spinner

Inter-Industry Gin-Spin Tests

By Dr. C. R. SAYRE
President, Delta and Pine Land Company

THE NATIONAL Cotton Council has just published the report on the industry-wide ginning-spinning tests. The year and a half study is reported under the title "Cotton Fiber Properties, Spinning Efficiency and Fabric Quality as Affected by Ginning Practices."*

This scientific appraisal of the commercial effects of ginning practices on mill efficiency and product quality was sponsored by the Cotton Council's cotton quality committee, a group of the leaders of all branches of the raw cotton industry.

Why the Test? The advent of mechanical harvesting placed added duties on the ginner. Special problems in drying and cleaning cotton had to be solved. The solution adopted was to add machinery —dryers, overhead cleaners, lint cleaners—to the gin plant. Today, the modern gin is a costly and complex establishment.

The effects of these new and added processes on the spinning value of the cotton have been studied under closely controlled laboratory conditions; but a comprehensive commercial mill test of the effects of the new machines had not previously been made. Harvesting and ginning cotton under these new conditions raised serious questions regarding their effects on commercial spinning performances and qualities of end products.

The ginning-spinning test described in this report* was set up to answer some of these questions regarding the effects of ginning on the use value of cotton under commercial mill conditions.

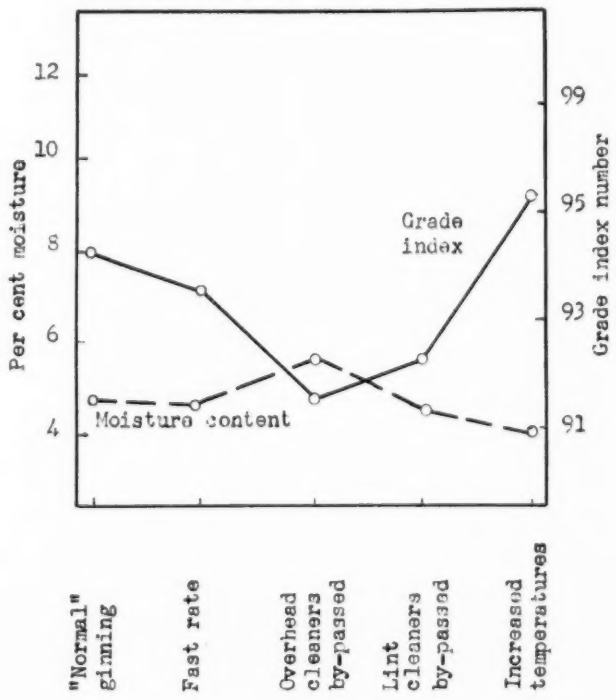
Effect of Ginning on Grade and Moisture Content. As regards the effects of ginning on grade and moisture content of the lint cotton, the report shows that by-passing overhead cleaners produces the highest moisture content and the lowest grades, on the average, in the test. These effects are illustrated in Fig. 1, which is based on the averages from the seventeen series of cottons.

Drying the cotton at high temperatures resulted in the lowest moisture contents and the best grades.

By-passing lint cleaners also resulted in low grades.

Three classers agreed that staples were not materially affected by any one of the ginning conditions. Neither were fiber properties changed appreciably by the ginning methods used. As

FIG. 1. Moisture content and grade index number of lint cotton as related to variations in ginning.



*A free copy of the complete report, "Cotton Fiber Properties, Spinning Efficiency and Fabric Quality as Affected by Ginning Practices" may be obtained from Claude L. Welch, production and Marketing Division, National Cotton Council, Box 18, Memphis 1, Tennessee.

How The Ginning-Spinning Test Was Conducted

COMPLETE DATA were collected at every step of manufacturing, and scientific control over the experiment was exercised at all times. To be sure that products were all tested at the same level of precision, the mill products were all tested at some central laboratory.

Counts of neps in card webs, and yarn strengths and appearances were all determined in one laboratory; evenness tests were all made by another single group of technicians; and nep counts in all dyed cloths were made by one person. Other tests were made in the same way.

Duplicate small samples from all lots of raw cotton were spun by the United States Department of Agriculture Spinning Laboratory, Clemson College. There were a special nep test on all lots of raw cotton by the Pepperell Manufacturing Company and fiber tests by four other laboratories.

This original broad scale experiment was developed and guided by the Industry-wide Committee on Cotton Quality, a group of leaders representing all parts of the raw cotton industry. The details of the spinning and all subsequent processes and tests were arranged through the American Cotton Manufacturers Institute's research committee. The co-operation of ginners, gin machinery manufacturers, cotton mills, farmers, and technical employees made the mill scale trials possible.

The ginning-spinning test was organized as follows: Three gins in each of two areas were used in the test. Each gin processed three series of twenty-five bales each, except one gin handled only two series. One series for each gin consisted of hand-picked cotton, and the other two were machine-picked, making a total of seventeen series. A complete series of twenty-five bales went to one of the seventeen co-operating mills to be made into print cloth.

Each series of twenty-five bales was divided into five lots of five bales each, one lot for each of the five following ginning conditions:

1. "Normal" ginning, or ginning as in regular commercial practice.
2. The same as in (1) but ginning with a tight seed roll and at as fast a rate as possible.
3. The same as in (1) but bypassing as much of the overhead cleaning as the gin lay-out would permit.
4. The same as in (1) but bypassing the lint cleaners.
5. The same as in (1) but using as high temperatures as possible for drying.

Although the mills made many tests, the broad groups of tests may be listed as follows:

1. Yarn strength.
2. Strength of cloth.
3. Yarn and fabric appearance.
4. Neps, trash, and naps in raw cotton.
5. Ends down during spinning.
6. Percentage of mill wastes.
7. Neps in grey cloth.
8. Neps in dyed cloth.

stated in the report, fiber "properties were tested by four different laboratories which were in general agreement that ginning variation did not affect fiber properties. Maturity and fineness would not be expected to change, whereas strength, and particularly length, could conceivably be affected. A loss in staple length and decreased strength have often been associated with excessive drying when compared with samples ginned under optimum conditions, but these effects were not observed in these tests."

The report continually emphasizes the primary purpose of this study to be the effect of ginning practices on the factors of mill efficiency and product quality, such as yarn and cloth strength and appearance, neps and trash in the raw stock, ends down in spinning, percentage of mill wastes, neps in grey cloth, and neps in dyed cloth.

Highlights of the tests which are of primary interest to cotton mills follow:

Yarn and Fabric Strength. Upon the important quality factors of yarn and fabric strengths the report states, "Variations in yarn and fabric strengths were small but reasonably consistent. Cottons which were overdried produced both yarns and fabrics of slightly lower strength than the others, but these differences were small. Yarn strength is generally correlated with fiber strength, i. e., strong fibers usually produce strong yarns. Fiber strengths did not change with variations in ginning; however, there was a trend for the yarn and fabric strengths to be lower for the samples dried at the highest temperatures."

Yarn and Fabric Appearance. There was likewise little consistent effect of ginning conditions on yarn appearance. It is shown in the report that, "Yarn appearance is often associated with number of neps in the card web. In spite of the fact that ginning variations show a significant increase in neps in card webs and a difference in classers' grade, there was little effect on yarn appearance grades except in the mill spun, USDA tested 40s filling yarn. When the fabrics made from these same yarns were dyed, however, the samples dried at the highest temperatures showed more neps than the others."

In addition to the yarn appearance determinations, the fabrics were ranked according to quality by two qualified buyers. These rankings more or less confirmed the fabric appearance findings with the added information that there was some indication that fabrics made of hand-picked cottons were superior to those made of machine-picked cottons, and that there was some tendency for fabrics made from lint that bypassed lint cleaners to be of better quality than those made from lint-cleaned cottons.

Neps in Card Webs and Ends Down. Neps in card webs and ends down are important criteria to the spinner as to the probable quality of his work and the efficiency of his operations, respectively. If a lot of cotton adversely affects both these factors, it can be of serious importance to the spinner. Figs. 2 and 3 illustrate the findings on

neps in card webs and ends down. There is little doubt that some of the ginning conditions did have an effect on these two mill factors.

In Fig. 2, the two lower curves show the neps found when the cotton was processed under special and laboratory conditions. The variations in neps between the several ginning conditions are small. The upper curves show the result when the cottons are processed under practical mill conditions.

The report summarized the story by stating, "The number of neps in the card web made directly from the raw cotton, the small samples, and the mill spun cottons was lowest when the lint cleaners were by-passed. In the mill scale tests, by-passing the lint cleaners considerably reduced the number of neps in the card web."

Drying cotton at high temperatures resulted in a definite increase in ends down as shown in Fig. 3. When lint cleaners were by-passed, the mill efficiencies, in terms of ends down, tended to be the best in the entire test.

As given in the report, "Ends down, which is the number of breaks in the yarn per 1000 spindle hours, is another important economic factor in the cost of spinning cotton. The tendency for overdried cotton in this study to cause more ends down verifies the belief of some spinners that 'brittleness' of fiber and low spinning output are associated with overdrying. Although the treatments showed somewhat inconsistent differences, the lowest number of ends down was recorded for the samples that by-passed the lint cleaners and the highest number in the samples dried at the increased temperatures."

FIG. 2. Neps in 100 square inches of card web as determined for raw cotton, in card webs in commercial and small sample spinning, and in dyed cloth, as related to variations in spinning.

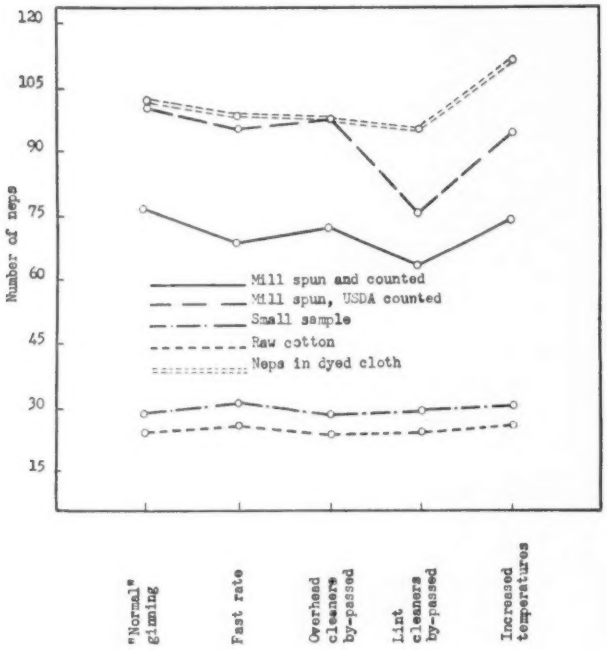
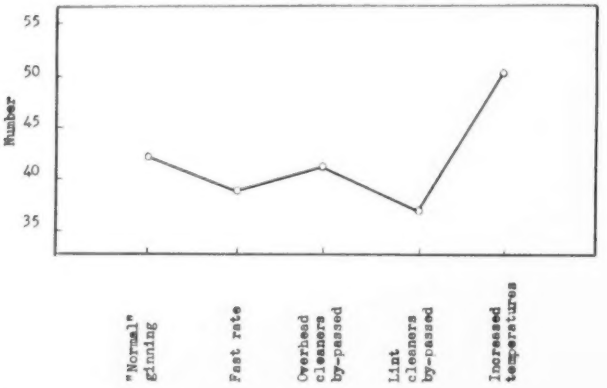


FIG. 3. Number of ends down per thousand spindle hours in spinning, as related to variations in ginning.



Percentage of Mill Wastes. The ginning conditions that produced the lowest grades caused the most mill waste.

Neps in Grey and Dyed Cloth. Neps in cloth are of great economic importance to the mill—in fact neps in the fabric have much to do with the acceptance of the fabric in the market. However, it was found difficult to determine exactly the relationship between ginning conditions and neps in fabrics. It was found that on the average the samples dried at the highest temperatures showed more neps in the fabrics than the others.

That there are relationships between ginning practices and manufacturing efficiencies and product qualities is shown by this study. Just how important these relationships are is perhaps not always perfectly clear in all cases. On the basis of this study plus numerous other observations, certain lines of action seem indicated:

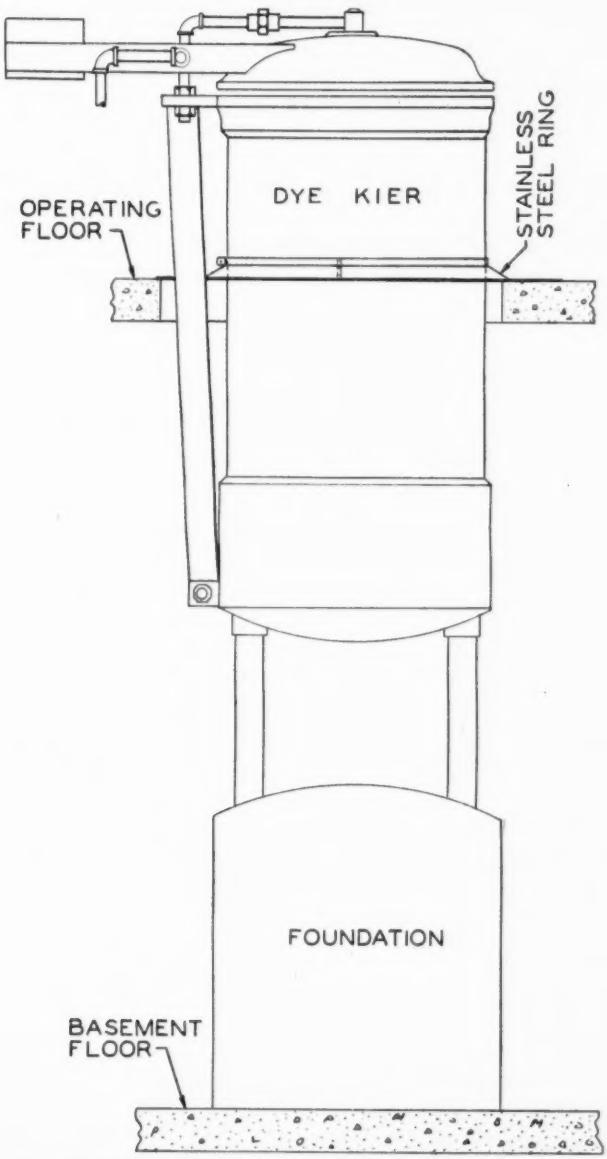
1. Recognition of the several factors in lint other than grade

(*Continued on page* 229)

Close Openings Around Kiers!

Keep lower floors clean: protect operatives and machines.

By R. J. TUCKER, JR.
Plant Engineer
Roanoke Mills Company



A COMMON problem confronting almost any master mechanic is that of properly covering openings in floors around such machinery as dye kiers, bleach kiers, and other units requiring room for the original installation and also for subsequent expansion and contraction during operation.

Frequently, a 2- or 3-in. opening remains around the equipment. Dyehouses are often equipped with several machines installed through the operating floor.

Our Roanoke Mills No. 1 maintenance overseer, S. S. Smith, noticed an excellent solution to this problem while visiting another textile mill and immediately put it to use. It is very simple and most effective. Stainless steel rings were fitted snugly around the sides of the machinery involved as shown in the sketch.

Several specific benefits have been derived from this installation. The dyehouse basement remains clean because there are no convenient openings through which trash may be thrown when the floor above is cleaned. Men working in the basement are protected from injury by tools or fittings carelessly dropped through the openings. The dye machine operators are now much more careful to prevent any overflow of dye liquor as it will now run onto the floor around their own feet instead of draining into the basement and causing excessive deterioration of machinery which occurred previously. The overall appearance of the main operating floor is improved by closing over the opening around the machines.

Mildew Can Damage Cotton in 6 Hours

---even though not seen by the naked eye

MILDEW is often difficult to detect until too late: attack can begin within six hours: favorable conditions for molds: protection for cloth shipped to tropics.

The second article of a series dealing with research work and the practical application of research findings in the mill.

MILL MEN and researchers are familiar with the damage that molds or mildews do to cotton fabric. Also, as a result of research during World War II, it is known that there are mildew-resistant treatments which are effective.

What is not known is how these microscopic organisms break down cotton so rapidly.

The scientist knows that molds are plants and that they cannot digest cotton by chewing it up. But, it is known that molds will grow whenever there is plenty of moisture and when they are in contact with organic materials. Just as plant seeds sprout under the influence of moisture and warmth, so do mold spores sprout under similar conditions.

If this sprout comes in contact with organic material which it can digest, its enzymes will change this material in such a way that it will be able to pass through the cell walls of the mold as it grows. Thus the cotton is dissolved and loses its strength.

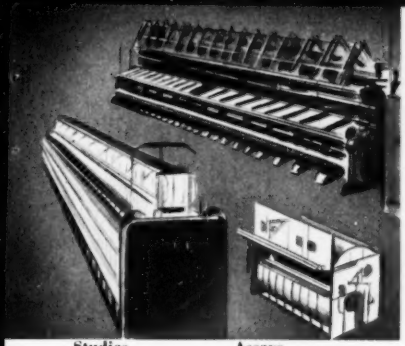
But, while it is being attacked it does not seem to lose its appearance as fabric even after extensive damage has taken place. The reason for this is that each cotton fiber is a combination of resistant and non-resistant cellulose. The non-resistant cellulose is called amorphous cellulose and is believed to be readily dissolved by the mold enzymes. However, there is more of the resistant or crystalline cellulose in each cotton fiber so that the fabric appears to be undamaged until it is handled, whereupon it falls apart.

The localized nature of mold attack on cotton can be seen under the microscope when a fiber is bathed in weak sodium hydroxide. This chemical has no effect on undamaged fibers. However, if molddamaged fibers are examined under the miscroscope during the first 24 hours of attack, the fiber appears no different from the healthy fiber, except for the presence of the mold. But if sodium hydroxide is added, the cotton is seen to dissolve away in one or two spots along the fiber.

What has happened is that the mold has found these weak places and has begun the process of dissolving the cotton. The sodium hydroxide completes the process. On the other hand, if the fiber is permitted to be attacked by the mold for a longer period of time, as for example 3 days, the sodium hydroxide solution is no longer required to show these areas along the cotton fiber where the mold has dissolved away the cotton.

The results* of such experiments

*The effects of microbiological attack on breaking strength of textiles have been studied in many laboratories. Of interest to those desiring to review recent findings, see "Microbiological Deterioration of Cellulose During the First 72 Hours of Attack" by Edward Abrams, "Textile Research Journal," February 1950.



Studies Assays

by research men are of use in the study of the chemical structure of the cotton fiber. They are par-particularly useful in the development of methods to prevent mold attack. It is quite likely that to protect cotton from molds it is necessary only to protect the non-resistant or amorphous regions of each fiber.

Cotton Can Be Attacked Within 6 Hours. Also, this work is of interest to the mill man because it shows that within a matter of 6 hours cotton fibers can be damaged by molds to a considerable extent. There is sufficient moisture in most mills to cause mold spores to germinate and to grow. Cellulose-destroying molds are present in every part of the world.

If conditions are proper for the growth of mildew, cotton or other cellulosic fibers can undergo an important loss in breaking strength within two days after exposure, without any visible evidence of mildew. This can be determined by microscopic examination but not by the naked eye.

Favorable conditions for mildew on cotton are cotton moisture content of over 10%, relatively high storage temperatures (of about 90 F) and poor ventilation. The main purpose of good ventilation is to dry out spots of cotton which have become wet.

In view of the fact that mildew conditions begin early and subsequent weakening of stock can occur within two days and without visible evidence of such as coloring of stock, it would be wise to bear in mind that mildew conditions can affect stored cotton, and stock in process, such as damp sliver stored in bottom of cans, wet stock, stock under dripping pipes, etc. Fibers can lose as much as 50 to 70% strength in 72 hours under extreme conditions.

The possibility is that cotton thought to be good, but found weak, could have been attacked by undetected mildew action.

In the weave room the susceptibility to mildew is increased because starch is even better food for mildew growth than cotton; mildew growth which has begun feeding on starch will then feed on cellulose yarn once the starch is gone, thereby weakening the yarn. If yarns have not been sufficiently dried at the slasher or if beams are stored in excessive moisture, more favorable conditions for mildew growth are present.

The same would be generally true for cloth stored in the weave room or yarns and cloths stored in a damp warehouse.

Cloth for use in the tropics or for shipment by water should be protected by the addition of antiseptics because of high humidity conditions encountered.

The test method for mildew attack is based on the fact that deterioration is produced locally in small spots by the mildew spores. These spores produce an enzyme which breaks down the cellulose chain into shorter lengths so that the chain no longer has any strength in the fiber. This action may be seen under the microscope because the broken down chains are soluble in alkali solution, leaving small dents or holes in the fibers which can be seen at high magnification.

Where products are present which are more susceptible to mildew growth than cellulose (such as glucose or starch), the molds will attack these products first and will attack the cellulose only after most of the other product has been destroyed. This is important to manufacturers in that if they notice mildew formations on cloth, and if the cloth is washed soon enough, the fabric can be saved.

Engineering Advisory Council to Help Interpret Textile Data to the Public

A special Engineering Advisory Council to the Textile Committee on Public Relations has been established to help obtain factual information on the industry of public interest, according to Charles A. Cannon, the committee's chairman.

Composed of men engaged in the textile engineering, research and accounting fields, the Council will function as a group in making available to the Committee the individual talents and resources of its members as a contribution to the textile industry's program of public information.

S. B. Lincoln, Lockwood Greene Engineers, Inc., will serve as chairman of the Council. Other members include: A. D. Asbury, J. E. Sirrine Company, Greenville, S. C.; Dr. Walter J. Hamburger, Fabric Research Laboratories, Inc., Boston, Mass.; Dr. Milton Harris, Harris Research Laboratories, Washington, D. C.; John A. McPherson, Sr., The McPherson Company, Greenville, S. C.; Nathaniel M. Mitchell, Barnes Textile Associates, Inc., Boston, Mass.; Carl J. Shannon, Robert and Company Associates, Atlanta, Ga.; Walter Simister, Jr., Ralph E. Loper Company, Greenville, S. C.; D. Reid Weedon, Jr., Arthur D. Little, Inc., Cambridge, Mass.; Herbert L. Werner, Werner Textile Consultants, New York, N. Y.

In announcing the Council's formation, Mr. Cannon said:

"The textile industry is fortunate in having men of this caliber pool their valuable talents in a voluntary effort to help the industry maintain an authentic foundation for its bridge of communication with the general public. This Advisory Council will validate interpretation of the industry's economic problems which are important to the public because of the vital role that textiles hold in the national economy."

Highlights of the Knitting and

Staff Report

THE SECOND Knitting and Allied Crafts Exposition attracted more than 5000 knitting tradesmen during its five-day run at Grand Central Palace in New York City, April 21-25. [a preview of the show and list of exhibitors appeared in the April issue, pages 124-129.]

Notes made during the Exposition which was held concurrently with the annual conventions of the sponsoring organizations—National Knitted Outerwear Association and The Underwear Institute Inc.—follow:

Sidney S. Korzenick, executive director and counsel, National Knitted Outerwear Association: "The production of wool sweaters in every category declined in 1951; the production of the non-wool counterpart (synthetics), increased in virtually all instances." The figures:

Women's all-wool pullovers	down 12%	Other synthetic fiber cardigans	up 5%
Nylon sweaters	up 10%	Men's all-wool sweaters	down 15%
Sweaters of other fibers	up 14%	Men's blended garments (wool content)	up 5%
All-wool cardigans	down 11%	Men's synthetic fiber sweaters	up 10%
Nylon sweater coats and cardigans	up 104%		

A Manual of Recommended Practices. Thirty-five pages plus five charts may provide the knitwear industry with a universally practical guide for determining costs and selling prices. Prepared by Scovell, Wellington & Company for NKOA, the manual consists of three major sections which cover cost principles, sheets, and records. It is entitled "Manual of Recommended Practices For Determining Costs and Selling Prices."

C. A. Strodl, textile fibers department, Carbide & Carbon Chemicals Co.: "Men's dynel socks are currently being produced at a rate of about half a million pairs a month."

Thomas Karsten, chief, Consumer Goods Division, OPS: Outlining OPS policy before the 86th annual meeting of the Underwear Institute, spokesman Thomas Karsten announced that controls would be suspended, rather than eliminated, for commodities whose prices are materially below ceiling and are not likely to rise to ceilings within the foreseeable future.

NKOA Officers Elected. Milton Davis, Yorkshire Knitting Company, was re-elected president, NKOA, for third successive year. All other officers were re-elected. Edgar Stewart, Catalina, Inc., was elected vice-president to fill the vacancy created by the death of S. B. Hyman. Frank Titelman, Puritan Sportswear Co., and H. L. Whiting, H. L. Whiting Co., were named alternate directors.

Knit Goods Shrinkage Claims. The Underwear Institute will be keeping a sharp eye out for extravagant claims relating to knit goods shrinkage, according to Roy A. Cheney, Institute president. Proof of claim will be demanded; the Federal Trade Commission, and in some instances, the Department of Justice, are in store for those who can't produce.

Knit Goods Shrink-Resistance Advertising. The Underwear Institute's subcommittee on shrinkage terminology agreed that advertising should not convey the idea that a knitted garment contained no residual shrinkage. Justin Wyner, The Vanta Co., speaking for the subcommittee, advised manufacturers who wanted to make specific claims of percentage of shrinkage to wait until ASTM officially adopted a test procedure.

Charles Dorn, chief, research laboratory, J. C. Penney Co.: "The design and manufacture of the knitted garment is just as important a contribution to relaxation shrinkage as the shrink-proof process itself."

Flammability. Opinion is that national legislation on the subject of flammability is essential in order to avoid enactment of contradictory legislation on lower levels of government (state, county, city, and local).

T-Shirt Standardization. A range of chest girths of 9 inchs fit about 95% of the people. Robert Nields, Ware Knitters, Inc., believes that three sizes would fit over 80% of the men in this country, while four sizes should encompass 90%.

Elastic Web Standards. The Underwear Institute and the Webbing Manufacturers Institute are jointly setting up standards for elastic webbing.

Forecasts. Peter Drucker, professor of management, New York University, predicts no possibility of depression this year. John H. Vogel, vice-president, Meinhard, Greeff & Co., Inc., predicts that profits will be down but smart people will be making money. Said Mr. Vogel: "When the public knows it is getting honest value, the response is tremendous." Also, "Management's awareness of the time to scrap old machinery may be the reason for a company's survival."

Leo Cherne, executive secretary, Research Institute

Allied Crafts Exposition

of America, states: "As the world's most noted pessimist, I can say that there is no possibility of depression this year." The armament effort and military and economic aid to Marshall plan countries prevent reduction in national output. And after that, the slack will be taken up by the Point Four program.

Suggestions For Knitters. Miss Anne Hyman, James McCreery & Co., wants knitters to keep abreast of fashion developments, and informative labeling regarding serviceability of knit garments and swimsuits. Sidney Garfield, Hirshon-Garfield, implores the knitwear industry to give advertisers something "new" to sell, something with fresh appeal. Promising items: knitted topcoats, suits, sport jackets, and sport shirts—all in line with the trend towards casualness in dress.

Howard Collier Retires As Chairman. Howard Collier, Griffin Knitting Mills, retired as chairman of the Underwear Institute's executive committee, receiving a silver bowl to commemorate the occasion. Wesley M. Heilman, Gibbs Underwear Co., succeeded Mr. Collier. Elected vice-chairmen were: Thomas D. Russell, Russell Manufacturing Co.; Edward L. Gruber, Spring City Knitting Co.; C. C. Humphrey, Munsingwear, Inc.; and James F. Nields, Jr., Ware Knitters.

Merger of Knitting Shows. Under consideration is the joint exhibition of the Knitting & Allied Crafts Exposition and the Knitting Arts Exhibition. Involved in the merger would be the management of both shows and the industry associations concerned. Meanwhile, an option has been taken on Grand Central Palace for April, 1954, for the third biennial KACE.

Brief Description of Newer Machines Displayed at the Show

DEVELOPMENTS not previously reported in the "New Equipment" section of TEXTILE INDUSTRIES *are briefly described here. For additional information regarding any of these machines or devices, simply note the number appearing at the end of the description of the item in which you are interested in the appropriate space on the Business Reply Card on page 228. Drop the card in the nearest mail box. No postage is necessary.*

"Super-Loop" Terry Striper

Long loop terry stripes for beachwear and outerwear use can be knitted on circular jersey equipment announced by Supreme Knitting Machine Co. This new type of cloth can be knitted on Supreme's Model LT/SA Automatic "Super-Loop" Terry Striper. Each loop is said to be knitted firmly into the body of the fabric so as to resist snagging or pulling out. The long loops are adjustable for different lengths and densities by means of simple pattern wheel jack arrangements.

The machine is adaptable to yarns of varying counts and fibers, permitting a range from heavy weight bathrobes to light weight polo shirts. Stripe and color variations are possible for the production of body stripes, club stripes, and chest stripes with Supreme's standard four-color automatic striping boxes. Colors at each feed may be individually controlled by means of a simple design chain and internal cam arrangement.

The Model LT/SA uses 16, four-color striping boxes, 8 stationary backing feeds, and produces up to 20 yards per hour of terry stripes and up to 30 yards per hour of single color terry.

When converted to an automatic jersey striper, the Model LT/SA can produce up to 40.5 yards per hour of plain jersey and 25 yards per hour of automatic stripes, it is claimed. The cloth from a standard 26-inch, 18-needles per inch machine is 60 inches wide after finishing. Included are an 80-end yarn stand, 80-end tension ring, and an 80-end double electric stop motion. Other diameters and stop motoin. Other diameters and cylinder cuts with corresponding number of feeds are available. **(F-1003)**

Model "Jacloc" Style PR-19 Rib Body Machine

A fast, versatile 24-feed 30-inch rib body machine is announced by Brinton. Pullover interlock bodies can be produced on this knitter, Model JACLOC Style PR-19, to which may be sewn 2 x 2 rib bottoms knitted on separate machines. When set up for jacquard stitch, in addition to interlock fabric, it produces such designs as blister stitch, blister and grenadine, combination blister and jacquard, grenadine, two or three-color jacquard, and welt stitch.

Special features include 24 design extra large wheels, needle selecting dial on each of the 24 feeds, 9 to 14 needles per inch, dial cap with double needle race, enclosed motor drive, and attachments for lay-in or knit-in rubber yarns for bathing suit materials. **(F-1004)**

Jacquard Knitter for Jerseys

Jacquard Knitting Machine Company's Model LA-12 opens the field for new opportunities in jerseys, it is claimed. The unit is a 12-feed 30-

181st Council Meeting of AATCC

During the 181st council meeting of the American Association of Textile Chemists and Colorists, held at the Hotel Commodore, New York City, on April 18, a motion was approved to allow the treasurer to invest up to $75,000 in short term bonds.

The Publications Committee announced that 75 short tons of paper will be shipped to England before July 1 for publication of the Colour Index.

The Association will shortly release the first of its Textile Bulletins to all corporate members, and it is planned to continue this service to these members at regular intervals.

Membership was extended to 192 new members, divided as follows: 43 students, 29 juniors, 18 associates, 102 seniors.

inch circular knitter with 12 three-color yarn changers. **(F-1005)**

High and Low Butt Double-Lock Machine

Model DDD, a fully-automatic, double-lock machine equipped with high and low butts is being offered by Dubied Machinery Company. Motions are controlled by a movement chain located on the side of the machine. 14 rpm is claimed for the machine. **(F-1006)**

Hole and Run Detector

Stop-Motion Devices Corp. is now producing hole and run detectors for revolving and stationary head knitting machines. When equipped with this type of stop-motion, a knitting machine will automatically knock-off before more than three inches of fabric is knitted after development of a hole or run, the manufacturer claims. As applied to revolving heads, the detector is mounted in the center shaft and revolves inside the tube. An adjustable shoe presses against the cloth while four spring-loaded fingers ride against the inner surface of the tube.

When the stop motion is tripped upon penetration of one of these fingers through the cloth, a plunger extends into the fabric and makes electrical contact with an arm clamped to the bed of the machine on the outside of the tube. The stationary head hole and run detector is similar in function. However, the unit is mounted on the outside of the cloth. Furnished with signal lights and cut-out switches. **(F-1007)**

Waffle Knit Underwear Tentered

Navy waffle knit underwear is successfully being processed on the Kastrinsky steam tentering and calendering machine according to the manufacturer. The fabric is fed clip-tentered to size to the steaming unit, and then cooled to room temperature by a newly incorporated blower system. The fabric is flat-folded after processing. **(F-1008)**

Tandem Carriage Links and Links Knitter

A new tandem carriage fully automatic link and link (purl stitch) knitting machine which employs a double jack, double butt system is being introduced to the trade by Queens Machine Company. The double butt, double jack system makes possible a simplification of carriage cam arrangement, use of light weight cam carriages running in tandem, and the elimination of bridges and latch openers employed in conventional link and link machines.

The Queens machine will knit multi-color float work as well as cable stitch and rope stitch designs. A simplified stitch adjustment and faster carriage travel are other features of this knitter, according to the manufacturer. Only two stitch settings, compared to eight or more on conventional machines are required. Snapper arrangements allow rapid design changes. It is stated that no production time is lost due to laying out designs on graph paper, stamping cards, and inserting them in the machine. **(F-1009)**

Poodle 'n Rib Terry Machine

Edmos Products Corp. is offering a machine which knits poodles and terrys combined by alternating panels of 2 x 2 and loops. The knitter can also produce all-terry or all-Swiss rib, by changing dial and cylinder cams. A 15-inch, 22-feed machine can knit 65 yards per hour at 80 per cent efficiency, according to Edmos. The Poodle 'n Rib machine is available in 12 to 26-inch diameters. All standard accessories are included similar to those incorporated in the Model AM machine. **(F-1010)**

Fancy Rib Children's Gloves

An attachment for making half cardigans on Fidelity Machine Company's Multi-Design Ribber makes it possible to knit fancy rib children's gloves on the 3-inch 90 x 90 machine. Designs and color combinations are unlimited, according to the manufacturer. **(F-1011)**

"Air-Cooled" Fabrics

Open, vent-knitted areas on plain jersey backgrounds can be produced with Supreme's Model LRP Vent-Knit machine. As stated by the company, this pattern is a latticework of stitches with openings to let heat out and coolness in, making it ideal for summer wear and underwear sales. The fabric is said to be run-resistant, full-bodied, and elastic. 28 yards per hour production can be obtained. **(F-1012)**

Tensionless Finishing Machine

A tubular knit goods finishing machine equipped with overfeed drive rolls is claimed to reduce fabric shrinkage by its manufacturer, Joseph Pernick Co. It is available for all ranges of stock and has a speed range from 10 to 50 yards per minute. Variable speed cone drives are rapidly adjustable and roll pressures are regulated by compression springs. **(F-1013)**

Conversion of Foot-Operated Press

The New Yorker "Convair" is a self-contained converter unit which can be installed on any make or style of foot press without taking it out of the line. The unit is contained in a small box measuring 13½" wide by 8" deep by 20" high. It weighs 85 pounds, and uses about .118 cubic feet of free air per operation. Included are all the elements necessary to close the press with light or zero pressure, and lock it under heavy pressure. The locking pressure is variable by adjusting the original pressure regulator with which the press is equipped. Available from New York Pressing Machinery Sales. **(F-1014)**

Automatic Knitters Steam Press

The Modern Pressing Appliances Co. has announced the Super-Garmatic knitters steam press, a fully automatic unit in which eight operations are actuated by the touch of a button. Each operation is individually regulated. **(F-1015)**

STA Panel Discussion:

From Cotton to Synthetic Fibers

South Carolina mill men consider problems in processing synthetics on cotton type machines.

Staff Report

THERE ARE more problems in the processing of synthetics than could be covered in a dozen morning meetings, but the speaker and the panel of experts at the South Carolina Division (STA) meeting in Spartanburg, on April 12, succeeded in touching on a great many of the difficulties which are faced by men using cotton type equipment in switching over to synthetic fibers.

The only prepared paper was, "Problems in Slashing Synthetic Fibers," by G. M. Anderson, of Penick & Ford, Ltd., Atlanta, Ga. (See condensation on page 120.) Following the presentation of this paper, a panel of experts answered questions previously sent in to Chairman James A. Chapman, Jr., Supt., Riverdale Mills, Enoree, as well as a number of other questions from the floor.

The panel was composed of Robert T. Stutts, president and treasurer, Carolinian Mills, High Shoals, N. C.; Joe C. Cobb, general superintendent, Pacific Mills, Rhodhiss, N. C.; Carl Brandt, Whitin Machine Works, Whitinsville, Mass.; William Pittendreigh, superintendent, Riegel Textile Corporation, Ware Shoals, S. C., and Mr. Anderson.

Longer Staple Now Used. Mr. Brandt began the panel discussion with a summary of current practice in running synthetics. The newer synthetics, he said, are being processed from much longer staple than has been past practice. At one time, most spun synthetics were from 2½ to 3 denier and of 1½ to 3-in. staple. Now the trend is toward 4½ and even 6-in. staple and deniers of 5, 8, and 11. These staples and lengths give fabrics with characteristics similar to worsteds.

While the short staples and fine deniers can be handled satisfactorily on regular cotton machinery, the heavier and longer fibers require larger rolls and wider settings in drawing and spinning, he said. Also, the top rolls require more weight. Worsted machinery of the American System seems to do the best job, he reported.

When staple gets as long as 4½ in., according to Mr. Brandt, it is hard to build a good lap on a picker. It has been found that pin drafting, or gilling, does a more satisfactory job. However, very satisfactory laps can be made on a picker when staple lengths are 3 in. or less.

It is important to understand, Mr. Brandt said, that the fabrics made from heavy denier, long staple synthetics are not only made in much the same manner as worsteds, but are competitive with them on the market. Worsted manufacturers have always spent a lot of time and effort on inspection, on mending their fabrics, and on keeping imperfections at a very minimum. In return, they get good prices per yard for quality material. The manufacturer of competitive synthetic goods must put equal emphasis on quality if he is to expect competitive prices.

Lap Length. In answer to a question as to what length lap should be run on Acrilan, Dacron, Orlon, and similar fibers, the panel agreed that 15 - 20 yards is about right. Such a length will give even laps, but laps tend to split on longer lengths. It was also stated that sliver variation could be expected to be 15 - 18% if card is fed with a lap, and perhaps 50% higher if a Bramwell feed is used. (The Bramwell feed is an automatic hopper used to feed raw stock to a card.)

Tinting. The next problem brought up was that of tinting the raw stock. Some mills have been having trouble with the tint gumming the fibers, and it was recommended that the tinted laps be allowed to stand overnight before running. In this way the tint dries thoroughly before the lap gets to the card.

It was also mentioned that care must be used in selecting tints, for when blends are used, tints may act as dyes on one of the fibers in the blend and refuse to wash out in finishing. Some rayon tints, for example, will dye wool. It is wise to check the tints being used with the fiber manufacturers of all fibers used in the blends.

Twist Multiplier. "What twist multiplier should be used for spun rayon?" was the next question. A mill representative, answering from the floor, stated that his mill used a multiplier of 3.65 for a 50-50% blend of viscose and acetate of 2-in. staple. That was as high as he had been able to use, but he recommended that any mill starting out use the multiplier suggested by the fiber manufacturer

MILL MEN AT STA

and then experiment.

On this same subject, one of the panel members said he used a twist multiplier of 3.25 on a blend made up of 50%, 3-in., 3 denier viscose and 50%, 3-in., 5½ denier acetate.

In answer to a question on the worsted vs. the cotton system on synthetics, the panel went back to the subject discussed by Mr. Brandt. One panel member stated that his mill had been able to run up to 4½-in. staple on the cotton system. It was then agreed that the worsted system produced fabrics of higher quality, but cost about 50% more in manufacture.

Pacific Converter. "What is being done to improve the Pacific Converter?" was the next question. A member of the panel who had been using these machines for some time, stated that his mill had not had a filling band in the woven cloth in five years, as a result of the good job done by the converter. However, he stated that there had been some trouble with the cutting of the tow, and an improvement is being developed to assure better cutting.

What Type of Squeeze Rolls? "Is it better to use yarn-wound or blanket-covered squeeze rolls?" the panel was asked. Either will do for slashing synthetics, according to the panel's sizing expert, G. M. Anderson. However, a heavier formula must be used with yarn-wound rolls, for rolls of that construction do not deposit as much size on the warp as does a blanket.

Blending. According to one member of the panel, most cotton men who go into synthetics do not recognize the importance of good blending. While one-process picking is fine for cotton, this panel member thought that two-process picking does a better job of blending and might be well worth the extra cost when synthetics are being run. He recommended running the picker as slowly as possible and using Kirschner beaters to give a better combing action. Cards, he said, should be run with low licker-in speeds and with a production of 14½ to 18 lb per hr.

On the question of card wire, the panel suggested the use of No. 90 wire on fibers of 3 denier or more and No. 100 on the finer deniers. A No. 70 wire was suggested for flats.

Warp Streaks. The last question put to the panel concerned the elimination of warp streaks. It was recommended that harnesses not be crowded. Use more harnesses and give the warp ends more room. Bad reeds and bent dents can cause streaks, and poor fiber blending will also cause streaks, it was said.

Slashing Synthetic Fibers

By G. M. ANDERSON
Penick & Ford, Ltd.
Atlanta, Ga.

(Condensation of address before the South Carolina Division of the Southern Textile Association. Mr. Anderson also served as a member of the panel discussion on sizing of synthetics.)

UNTIL RECENTLY, the textile manufacturer was limited in his choice of starch base sizing materials for spun synthetic fibers to low cold water soluble British gums. But as the result of recent research work, a new series of starch base products has been developed known as "hydroxy alkyl starch ester gums." These gums have a low congealing temperature, stable viscosity, high film strength, and they are much more easily removed from the finished product.

There is another new set of ester gum products which contain carboxylic and sulfonic groups, and these products also have some of the desirable characteristics described.

Quantity of Size. The highest quality synthetic warp is produced when the least amount of size is used to permit adequate weaving. Normally, better weaving protection can be provided with a light sizing of high viscosity. Thinner size is used when a heavy pick-up is required, as when weaving high count constructions. Unless there is a proper relationship between

HEAR PANEL OF EXPERTS*

viscosity and size concentration, there will be excessive stops and imperfections in both slashing and weaving.

Spun Viscose and Viscose Blends

Hard Size. In slashing synthetics, hard size can be either the result of roll marks or individual hard spots. Roll marks occur at a point where the squeeze rolls rest on the warp when it is stopped. Many roll marks can be eliminated by proper training of slasher operators.

Punching the creep speed button frequently to move the warp a short distance will reduce roll marks. Formation of these marks can also be reduced by maintaining a size level midway up the copper or stainless steel roll, and by the use of as thin bodied a base as possible.

The newer hydroxy alkyl starch ester gums will not congeal even when the cooked product is cooled to room temperature. The use of this type of product virtually eliminates roll marks.

Individual hard spots, which are the result of poor mixing, cooking, or storage, and low quality starch bases, can be largely eliminated by the use of the newer starches. These new starches are more easily handled, and their characteristics resist congealing.

Soft Warps. Frequently the cause of soft warps is too low added weight of size. The answer is, of course, to increase the concentration of size, and if the size viscosity is already too heavy, the starch base must be changed to a thinner material.

If an analysis shows that the warps are receiving sufficient weight of size, and they are still soft, the cause is either the use of a bad softener, or some other additive is needed to make the size stick to the yarn. It is suggested that 5% softener of the high melting point type be used with viscose and viscose blends if British type gums are used. About 3 - 5% of the same softener is enough if the new starch ester gums are the size base.

If an additive seems necessary for adhesion, protein bearing materials containing gelatin are recommended, but such additives are seldom required for starch ester gums.

Very high count weaves are sometimes soft because the yarns are so crowded on the slasher that the size is not properly distributed. This trouble can be overcome by using double size boxes and splitting the warp. Each half should be partially dried before it is brought back with the other half. This keeps one half from "stealing" size from the other.

Other factors which can cause soft warps are: (1) hard roll coverings, (2) low gear operation of the slasher in combination with low size box level and hard cushions on the rolls, (3) foaming in the size box, which is usually the result of the addition to British type gums of materials designed to lubricate the fibers or give them an antistatic finish. Calcium chloride is a cheap and effective defoamer. Stearic acid is also widely used.

(4) Loss of viscosity in British type gums as the result of prolonged storage, and (5) malfunctioning of the humidity system so that there is too much moisture in the warp during weaving.

Set Marks. Heavily sized warps usually show more severe set marks than lightly sized warps, for the same period of loom stoppage. Here, humidity is important, for it has been found that minimum size addition is possible with a relative humidity of 65% for viscose and 70% for viscose-acetate blends. Yarn ductility is also at a minimum at this relative humidity.

Both overdrying and underdrying contribute to the formation of set marks. A wet yarn is too ductile and will not recover when stretched. An over dried yarn will regain moisture in the outer portions, making them ductile, while the inner portions will be brittle, will shed, and there will be an excessive number of breakouts.

Best practice seems to indicate that moisture content of sized warp should be ½ to 1% less than the moisture equilibrium of the sized warps after being conditioned in the weave room for 24 to 48 hours.

Shedding. Viscose or viscose blend yarns shed more than cotton. Thin bodied size reduces shedding at the slasher but increases it at the loom. Also, the addition of large amounts of softener will reduce shedding at the slasher but will promote softness at the loom. Too little softener will result in shedding at both slasher and loom. Experiments in the mill to determine the best practice seem the best answer. However, excessive

(*Continued on page* 229)

*Left to right, **G. M. Anderson** of Penick & Ford; **William Pittendreigh** of Riegel at Ware Shoals; **Carl Brant** of Whitin; **Joe Cobb** of Pacific at Rhodhiss; **Bob Stutts** of Carolinian Mills. Chairman **Jim Chapman** of Riverdale Mills at right.

Thread Trimmers Clip Hose Cost

Here's the story of how one knitting mill protected its capital investment by another investment—a low cost thread trimming installation.

Staff Prepared

THE BIG INCH, Vincent Bergman of Industrial Hosiery calls it. Mr. Bergman isn't talking about that 1200-mile pipeline stretching from Mississippi to Pennsylvania. He refers to another one only 60 feet long. No natural gas will ever flow through it. This "big inch" happens to be an air conduit that connects 14 electric thread trimmers to a suction turbine at Industrial's circular knitting mill in Lebanon, Pa.

Installed in the grey goods finishing department, this equipment has doubled trimming productivity and paid its own way in several months. Average skilled operatives process 10 to 12 dozen pairs of fancy half-hose per hour; about 100 per cent more than their scissor-wielding predecessors. To Mr. Bergman, that is BIG.

Thread trimmers and suction turbine were supplied by Trim-Master. A ¼ hp motor delivers power to movable type trimmer heads by means of a five foot long flexible shaft. A flexible hose links the trimmer head to the "big inch," and this is the route for evacuating ends of clipped thread to a waste box located in the turbine housing. The waste box is emptied daily. Sufficient exhaust is generated by a 7½ hp turbine to allow the addition of four more trimmers to the "big inch."

The powerful suction pulls threads into the nip of the trimming blades for a close, precise, and clean trim of the stocking. The rapidly oscillating blades function in much the same manner as a conventional electric shaver but there the resemblance ends. The trimmer has the power and ruggedness for heavy duty clipping of every type of half-hose construction manufactured in the Lebanon plant. Its range covers elastic and plain threads, double sole and heel threads, clocking, wrapping, and other floating threads.

In making an analysis of hand and machine trimming, Industrial Hosiery has found a drastic decline in stocking damage originating from trimming. Electric trimmers, even in the hands of inexperienced personnel, are more gentle with the stocking than a scissor point.

Scissor operators suffered from two kinds of fatigue. One was the result of concentration—searching for threads. The other was purely mechanical—manipulating scissors up and down a vertical form for hours on end. Both contributed to carelessness and large scale damage, not to mention a low output. Many styles were too difficult to trim by scissors. Now, the combination of suction and electric clipping easily detects and trims the threads.

Centralized waste collection has improved housekeeping and, indirectly, the quality of work. In the scissor regime, threads littered operatives, fixtures, machinery, and the stockings. Although each operative was furnished with a receptacle for waste thread, more waste accumulated elsewhere than in the receptacle. There was also a time lost factor stemming from waste handling, brushing threads off stockings, and tidying up.

Operation. Very little skill is required to use the trimmers properly. The operative merely places the stocking on a stainless steel expanding form, uses a foot pedal which expands the stocking and facilitates processing, examines, and trims. The form is then revolved 180 degrees, and the opposite side is trimmed.

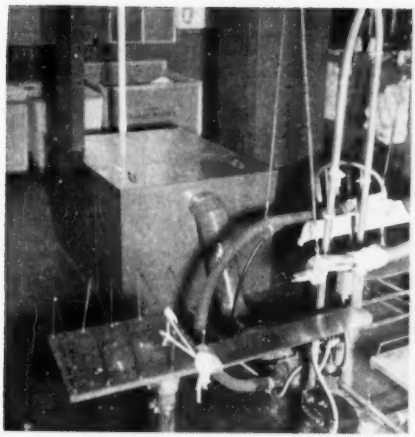
The trimmer head is suspended from a mast by a spring and safety chain, thus permitting free use of both hands when required. Two 40-watt daylight fluorescent lamps above each station provide a high level of visibility.

The trimmer sorts her bundle of work into four groups as trimming progresses; firsts, knitter mends, looper mends, and seconds. After counting each group and tagging, the bundles are sent on to the next stage.

Maintenance. Lubrication points are located at the trimmer head, flexible shaft, and ¼-hp motor. Each operative is furnished with an oil spout and is instructed to lubricate these parts three times daily or more often as required.

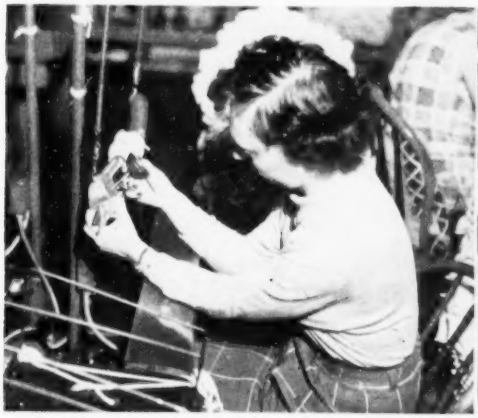
Rough edges on the steel forms are polished with emery cloth as soon as they develop. Holes in the flexible hose sometimes occur, but a wrapping of friction tape remedies this. Blades are sharpened as needed and replaced when teeth break. An inventory of spare parts assures immediate return of a unit to service, following a breakdown. Maintenance is estimated at less than $100 annually.

Lengths of top waste are pulled over forms and trimmer heads that are expected to be idle for long periods, protecting them from lint and corrosion. At the end of each shift, as a final precaution, the forelady inspects all of the units to be certain that the quietly running motors have been turned off.



BIG INCH POWER HOUSE comprises a 7½ hp turbine and waste collection housing.

PRODUCTION of 10-12 dozens per hour can be turned out by operators using the trimmers.

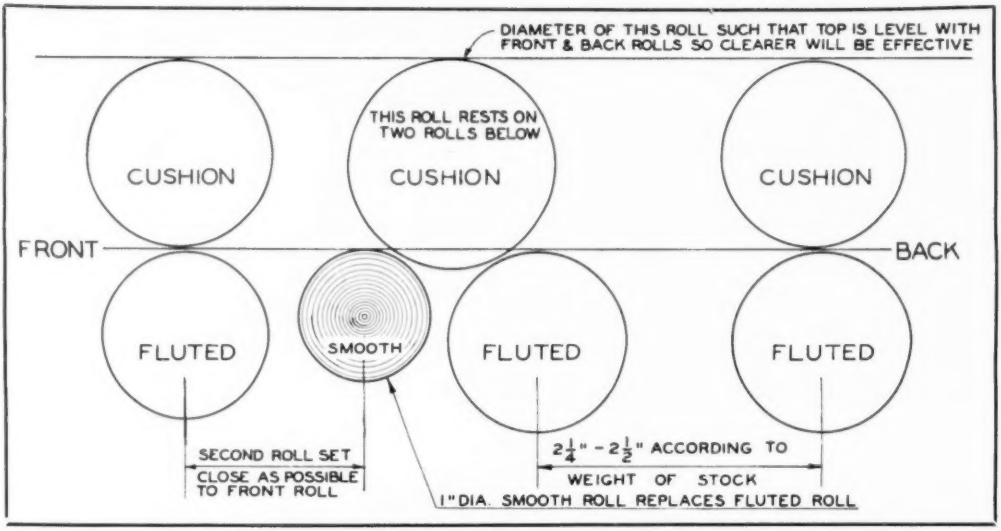


OILING is required on the trimmer engine. The motor and flexible shaft also require oil.

PROTECTION against lint and corrosion is provided by pulling top waste over trimmer head.

BIG INCH is ready for rapid extension. Four additional trimmer stations can be added.

PRODUCTION is expedited and quality is improved through use of the trimmers.


DIAMETER OF THIS ROLL SUCH THAT TOP IS LEVEL WITH FRONT & BACK ROLLS SO CLEARER WILL BE EFFECTIVE
THIS ROLL RESTS ON TWO ROLLS BELOW
CUSHION
CUSHION
CUSHION
FRONT
BACK
FLUTED
SMOOTH
FLUTED
FLUTED
SECOND ROLL SET CLOSE AS POSSIBLE TO FRONT ROLL
2¼" - 2½" ACCORDING TO WEIGHT OF STOCK
1" DIA. SMOOTH ROLL REPLACES FLUTED ROLL

3-OVER-4 ROLL ADAPTATION of standard 4-over-4 roll drafting arrangement.

Less variation with improvised

Three-Over-Four Roll Drafting

4-over-4 roll ribbon lappers, combers, and drawing frames converted to 3-over-4 roll arrangement by overseer in combed yarn mill.

Staff Prepared

A COMBED yarn mill in North Carolina has been using a new roll arrangement on ribbon lap machines, combers, and breaker and finisher drawing, with a remarkable improvement in uniformity all along the line. The new arrangement uses three rolls over four, the second roll at top resting on the second and third rolls below, with no specified clearance. The top roll rides free, or floats, and it does not carry a collar to provide clearance.

The overseer of carding is convinced that this arrangement of rolls is an improvement over the regular 4-roll system, previously used, and gives very nearly the fiber control and evenness of newer, 5-roll frames. The job of converting from 4-over-4 to 3-over-4, takes only about an hour per frame, and if the overseer of a mill now using 4-roll drafting wants to make a test, the time and material cost is low.

Change-Over Method. To change from standard 4-roll drawing to 3-over-4, have the machine shop turn down a 1¼-in. bar of steel to 1 in. diameter, and then match the other dimension of the roll to the dimensions of the fluted, bottom second roll. Replace the fluted roll with the smooth steel roll.

Move the slides which position the second roll as close to the front roll as they can be moved. The third roll at bottom is then set 2¼ to 2½ in. from the back roll, according to stock being run or past experience.

The top rolls are now put in place, and the second top roll is placed so as to run on both the smooth second and fluted third bottom rolls, as shown in the ac-

companying drawing.

It will be found that the middle top roll, when positioned as described, will run lower than the front and back rolls, and it will not be touched by the top clearer. To avoid trouble which this might cause, a heavier cot should be put over this roll, building up the diameter to about 1⅞ in., so that it will run properly against the clearer.

Since none of the top rolls runs on a collar, they may all be buffed as they wear and thereby give much longer life than rolls designed to run with a specific clearance between them and the bottom rolls.

It is also necessary to make a change in the hooks used to weight the middle top roll, so that the hooks will not bind against the bottom rolls. This is easily done by shaping the hooks into the form of a question mark, so they clear the bottom rolls.

Results. The mill overseer stated that the results achieved by the rearrangement of rolls can best be demonstrated by uniformity tests. Such tests, made on a Uster machine, show definite advantages for 3-over-4 drawing at this mill.

Stock run through a ribbon lap machine and then through a comber now shows a variation of 21 to 27 per cent. The same type of stock run through a standard, 4-roll ribbon lap machine and a 4-roll comber gave a variation of 32 to 43 per cent.

Stock from 3-over-4 ribbon lap and 3-over-4 combers, when carried through breaker and finisher drawing using 3-over-4 roll arrangement, gives an average variation of about 12 per cent.

When stock is handled entirely on 3-over-4, and is taken through a standard slubber, it shows considerably less variation than roving taken through the same process but through standard 4-roll equipment. Uster charts showed 22.4 per cent variation for 3-over-4 as compared to 32.4 per cent for 4-roll.

This same stock, carried through a 7 x 3½ speeder, gave a reading of 26.6 for 3-over-4 and 37.2 for 4-roll. The graph figures represent normal day-to-day operation.

Stroboscopic Measurements in Textiles

Important and frequently encountered textile industry applications for stroboscopic techniques were presented before the American Institute of Electrical Engineers' Northern Textile Conference in April by Engineer William R. Saylor of the General Radio Co., Cambridge, Mass.

The Strobotac—a small, compact and portable stroboscope* —used in a routine manner in periodic checks to determine average spindle speed in a frame and the extent of deviation of individual spindle speeds from this average, will also reveal other troubles which are not directly related to spindle speed: (1) slap of balloon; (2) misaligned or worn spindles; (3) crooked or worn bobbins; (4) sloughing and other yarn defects; (5) condition and action of rings and travelers.

For the stroboscopic study of looms, a contactor for timing the flashing light is employed. A contactor for use on looms must (1) be readily attachable to the crank shaft or cam shaft; (2) lend itself to attachment under crowded conditions; (3) provide a single closing of contacts once per revolution of the shaft to which it is attached and offer means for changing timing of this closing action throughout 360 degrees of rotation of shaft (control of latter adjustment must rest with observer).

The Strobotac is practically useless for loom study because of the low-repetition-rate in the weaving operation. For this type of work, the Strobolume has been developed. It can be flashed directly from a contactor, and the combination of Strobolume and Magnetic Contactor makes an assembly almost ideally adapted for loom work.

Studying Shuttle in Flight. The shuttle flight is governed by the timing and force of the pick. Once the contactor has been attached to the cam shaft, the stroboscope is caused to flash each time the cam shaft returns to a given position. By advancing the position of the fixed contact on the contactor, the timing of the flash can be caused to progress around the periphery of the shaft and so occur later and later or earlier and earlier. To locate the shuttle, the beam is directed at one point, say the left end of the shed, and the timing is advanced or retarded until the shuttle is seen in this position under the stroboscopic light. It can then be followed in its travel by slowly shifting the fixed contact and simultaneously adjusting the direction of the stroboscopic beam.

Careful observation of the shuttle throughout its traversal of the shed will readily reveal a faulty trajectory or yaw which results in disturbance of the warp ends and attendant blemishes in the fabric.

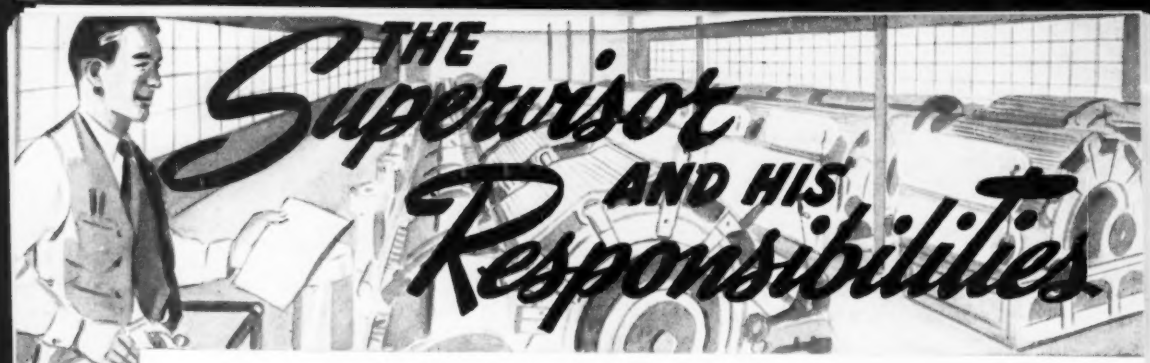
With the flashing light timed to show the shuttle leaving the shed and entering the box, inadequate deceleration, producing definite rebound of the shuttle as its flight is terminated, becomes very apparent.

Looping or slapping of the filling as it is delivered from the bobbin in the course of a series of picks can be watched in detail. Although stroboscopic observation is usually limited to motions that are repeated with only slight progressive deviations, this is one instance where persistence of vision and low repetition rate often will permit notice of anomalous behavior during a single pick.

The contactor can also be affixed to the loom crank shaft. This arrangement gives one flash per pick and illuminates the shuttle alternately in its flight from the two boxes. With proper timing and equal accelerations, these alternate positions will be symmetrical about the center of the shed at both the time of entering and the time leaving. If timing is wrong but accelerations are equal, flight from left will lead or lag that from right by a constant amount. If relative position on entering shed differs from that on leaving, picking forces are unequal and should be adjusted.

In addition to shuttle observations, many can be performed on the picking and shedding mechanisms.

*The stroboscope referred to in this discussion is an instrument which employs a high-intensity electronic flash tube, with the dual function of light source and shutter.



*Article 11** EXCLUSIVE By RAMON PARKS

Self-Improvement

WE DO NOT believe that any series of articles on the duties and responsibilities of the overseer would be complete without some discussion of the responsibility that he has to himself and to his company to strive constantly to keep abreast of technical developments affecting his department—and even the mill in general, industrial relations, industrial management, safety, or any other thing which would tend to make him a better foreman. (This may sound like the introduction to an article by OLD-TIMER, but, honestly, we are not trying to steal his thunder!)

Planned Program. The overseer's program of self-development (and it should be a program, not a haphazard, half-hearted effort) should provide for a definite amount of planned reading each week. This should include vocabulary building, a study of industrial or labor relations, technical developments (including at least one trade journal), safety and first aid, current events, etc.

Some of this reading may be done on the job, but usually it is best done in the quiet and comfort of his home, while he is enjoying his pipe or a cigar after supper. In instances, evening classes in some of these subjects are provided by the Vocational Department of his State Board of Education, usually in cooperation with the mill. Some of these classes may be held during working hours. (A good way for the overseer to really have to "dig" is for him to be an instructor in one of these classes.)

Even if an overseer is fortunate enough to have finished college, he can usually still improve his vocabulary. There is, perhaps, nothing so important as for him to be able to express himself clearly and concisely, either in a conversation with one of his employees, in the superintendent's office, or in a conference with his fellow overseers. He doesn't usually have to use a lot of big, high-sounding words to impress someone with his learning, but what counts is to be able to phrase his sentences correctly, clearly, and in words familiar to his listeners.

If possible, take a course in public speaking, but at any rate practice talking in public. Opportunities are available to almost any man to exercise this faculty in such activities as teaching a Sunday School class, serving on a Boy Scout committee, as a member of the local P. T. A., as an officer in a fraternal organization, and many others.

Labor Laws. The overseer who does not avail himself of every opportunity of improving his relations with his employees may soon find his job very difficult to run—in fact he may wake up some day and find himself out of a job. Although it would be an almost impossible task for the ordinary layman to keep abreast of all the federal, state, and local laws affecting labor and industry which have been passed within recent years, it is usually possible for him to have access to summaries of these statutes.

Some of these will appear in his trade journals; others will be in the daily press. Perhaps management could obtain certain of this information through the mill's counsel. If the mill has a definite and written

*Subjects covered in previous articles of this series: "Hiring and Training," "Employee Relations," "Cooperation," "Planning Your Work; Delegating Responsibility," "Machinery Maintenance," "Cost Control," "Quality Control," "Waste Control," "Good Housekeeping," and "Getting Production."

Reprints of individual articles of this series are not available. However, a booklet containing all eleven of Mr. Park's discussions is being prepared. Write the editors if you are interested.

labor policy, such as a union contract, the overseer should master this in detail—as well as seeing to it that his assistants do the same thing. Many a costly arbitration case could have been prevented had the overseer taken the trouble to learn and practice the mill's labor agreement. Perhaps the overseer, personally, does not like the agreement, but if the mill has signed it there is nothing the overseer can do but abide by it—or resign.

Technical Progress. An overseer cannot be a technical expert to the exclusion of other things, but it is certainly necessary for him to have enough knowledge of the technical aspects of his job to know that it is being operated at top efficiency and to know what can be expected of his employees. He should know the capacities and limitations of his machines. (In most cases he will have actually operated the machines before he was promoted to overseer.)

He should understand the various settings, gear trains, constants, and speeds. He should understand the reason for each process and just what it contributes to the finished product. He must know the causes of defective or substandard performance of his machines and what can be done to correct these things. He should understand the lubrication, care, maintenance, and repair of his machines.

Most machinery manufacturers furnish operation and maintenance manuals or bulletins with which the overseer should thoroughly familiarize himself. Trade journals usually have a department, such as "How Other Men Manage," in TEXTILE INDUSTRIES, where practical mill men contribute their experiences with the various machines under all kinds of conditions. No wide awake overseer can afford to ignore this valuable source of information.

Meetings and Mill Visits. Each overseer should be a member of and attend at least one trade association meeting each year. Not only will he receive worthwhile information from the various papers read before the association, but in mingling with his fellow overseers from other plants he may exchange ideas which will prove of mutual benefit.

Visiting other mills is another good way to learn what other overseers are doing. Naturally such contacts must be mutual; that is, if we expect other mills to permit us to visit and inspect their plants, we must reciprocate by allowing them to our mill. Some mills make a gesture of this sort, but when they allow you in the mill they appoint some young fellow as a guide who either does not know very much about what is going on, or else he has been instructed not to give out any information. The only way to hope to get information is to be willing to give information under similar circumstances.

Visit Textile Schools. Another good way to get valuable information is to visit one of the textile schools in your locality. These fine schools are in a position to act as clearing houses for information in all matters pertaining to textile manufacturing, knitting, finishing, etc. Many of the faculty members are practical mill men. Their facilities permit the running of all kinds of experiments, many of which would be impractical in a mill on regular production. Many of the staff members are better qualified to interpret and evaluate the results of these experiments than some of our mill executives. The students themselves, at least many of them, are better qualified to make these studies and experiments than some of the operators in the mills.

On the other hand, the visitor from the mill has a contribution that he can make to the school. He is able to present the mill's point of view. He can express his opinion as to whether something which seems to work fine on a small scale would work in regular production in the plant. We have actually made some of the visits such as here suggested and have found them to be mutually helpful.

Contact Supplier Representatives. Discussing one's problems with salesmen and machinery representatives is another way that an overseer can get valuable information which would be difficult to get otherwise. The days of the old time drummer are in the past. Most of the machinery and supply representatives who call on the mills now are more than just salesmen; they are sales and/or service engineers. Many of these men are experts in their field, and contacts with them can be valuable.

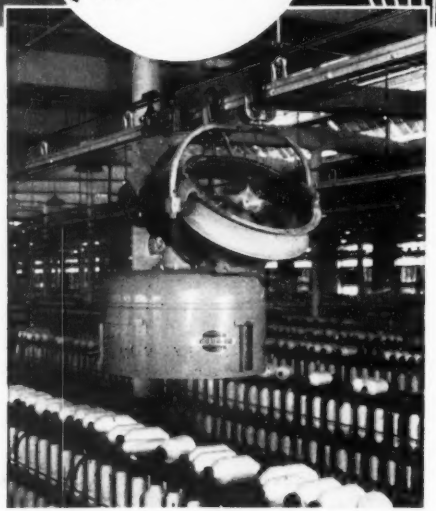
Even if the mill or group of mills has a central purchasing department, the mill manager is showing good judgment when he allows the salesmen to go into the plant and to make personal contact with the overseer. The purchasing agent can then get the overseer's appraisal of the value of the product or service which the salesman has to offer before the order is finally given. In this way both the purchasing department and the overseer may be mutually benefitted.

Written Reports. Another, and we think very good, method of self-improvement is for the overseer to do some writing. This writing may be in the nature of making reports. It may be a suggestion of some kind that he wishes to present to the boss. In fact all suggestions should be written out. It may look a little different when put on paper than when it was just in the mind. When giving something orally it is easy to omit important details which would be apparent when written.

A written report of a visit to another mill fixes certain details in the minds which might otherwise be forgotten. Another thing, if the overseer knows that he has to write a report of his visit he will just naturally be a little more observing than he would be if only an oral report is to be given. (Our plant hap-

AMERICAN MONORAIL *Automatic Cleaners*

SAVE LABOR • IMPROVE YARN PRODUCTION



You can eliminate fly, keep ceilings clean, reduce machine stoppage, lower cleaning costs and get better running work with American MonoRail Automatic Overhead Cleaners. Consultation with an American MonoRail engineer will reveal why Controlled Cyclonic Cleaning is used in so many textile plants. Write for 24-page booklet explaining cost-saving advantages.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE — CLEVELAND 7, OHIO

pens to be one of those which requires such written reports from its key men who visit in other mills, so the writer is speaking with authority on this particular subject!)

Another good writing practice is to contribute occasionally to one's favorite trade magazine. The average overseer may hesitate to do writing of this kind for fear that his composition and rhetoric are deficient, or that his spelling is bad. He has nothing to fear in this respect, however, for all such contributions are carefully edited before publishing.

He may fear unpleasant repercussions if his name is signed to an article. This can usually be taken care by the use of a contributor number or of a pen name. We believe that the editor will agree with us when we make the statement that many of the best contributions on everyday mill problems come from the practical men in the mill, rather than from the pen of the professional writer.

Many of the employees in the plant like to get the opinions of their overseer on current events. And to keep thoroughly posted on current affairs the overseer should subscribe to and read at least one daily newspaper and one or two news magazines. In this way he is in position to discuss intelligently the news of the day with any of his people.

The overseer who wants to become a better overseer should be concerned with the health and safety of his employees. Sometimes the local board of health issues bulletins on the common cold, tuberculosis, cancer, etc. The overseer should see that these bulletins are prominently displayed on the department bulletin board. He should cooperate wholeheartedly with the mill's safety program. He should serve his turn on the safety committee and should permit any of his employees to serve when called upon.

If first aid classes are available, he should attend one of these personally and should encourage his key people to attend such classes. He should be on the alert for hazards to health or safety and should encourage his employees to report any such hazards which may come under their observation. He should insist on proper first aid for even minor accidents and should make written reports of such accidents in line with the policy of the mill.

All of this sounds like a big order, and it is, but it is not too big for the man who wants to be a better overseer, and in line for something higher.—THE END.

Exposition Cotton Mills Observe 70th Anniversary

Commemorating the 70th anniversary of its founding, Exposition Cotton Mills Company of Atlanta, Ga., has published the story of the beginnings of the company and its growth during the past 70 years (1882-1952). In the words of the book's preface, "It is a story of the mill's people and machines, a story of those who direct, those who produce, and those whose savings have been invested to make possible the current modernization of the mill."

Attractively bound in corduroy woven at the mill, the book tells how the company was formed on April 5, 1882 by a group of Atlanta business men who were seeking "some practical use" for the buildings that housed the International Cotton Exposition (Oct. 5 to Dec. 31, 1881). The principal building, in the form of a Greek cross, was designed as a model cotton mill for Exposition purposes and is now the weave room of the Exposition Cotton Mills Co.

The record of the company is one of continuous growth. As time went on, the old exposition building became too small and additional buildings were erected, with the result that today the enterprise covers many acres of ground and the original structure is overshadowed by several units.

A modernization and expansion program now under way will be completed as the company enters its 71st year (see TI's account of this program in the July, 1951, issue, beginning on page 129). Buildings now under construction are a new clinic and cafeteria.

Hosiery Production for 1951 Off From '50; North Carolina Largest Producer

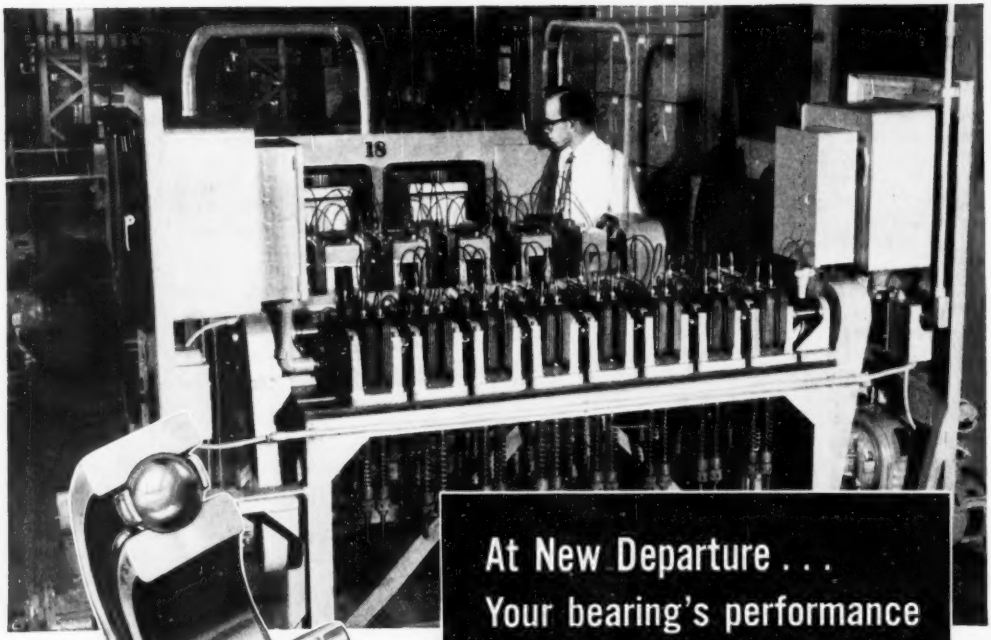
The 1951 total production of hosiery of all types was 3.6% lower than that of 1950, according to information from the National Association of Hosiery Manufacturers, but production still was higher than 1949, 1948, and 1947. These types showed increases for 1951 over 1950: women's seamless, men's full-fashioned, slipper socks, children's and infants', excluding anklets. Showing decreases were women's full-fashioned, men's seamless, and anklets.

Other data supplied by the association indicated that nylon stockings now constitute 99.1% of the production of women's full-fashioned hosiery and 63.8% of women's seamless hosiery; in seamless constructions, 400-needle stockings represent 85% of the total. 60-guage hosiery showed a rapid increase.

Noting the geographical location of production of hosiery, the Association's figures showed that 57.4% of the full-fashioned and 79.4% of the seamless goods are produced in the South. North Carolina is the largest producer of both types of hosiery.

The monthly average of operatives in the full-fashioned hosiery industry was 63,258 and 65,630 in seamless mills.

Exports of all types of hosiery in 1951 increased 13.7% over 1950 and 35.7% over 1949. Imports for 1951 were slightly lower in numbers, but higher in dollar value.



At New Department . . . Your bearing's performance is tested and proved *before* you use it

Considering the big part ball bearings must play in the efficient operation of your machine, it is important for you to *know*, and in *advance*, how the bearings will perform.

For example, you need to know what results may be expected from each type of grease under varying conditions.

Supplying you with this information is just one of the functions of New Departure's new and ultra-modern engineering laboratory.

To help you get the answers:

What is the determining factor of seal-bearing life?

How operating conditions contribute to metal fatigue?

Which has the most effect on grease life—speed or load?

Lubrication selection.

. . . a monograph, "Grease Lubrication of Ball Bearings," by New Departure's Manager of Research, Development and Design, will be mailed upon request. 163

Nothing Rolls Like a Ball . . .

NEW DEPARTURE
BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS
BRISTOL, CONNECTICUT

The payroll deduction scheme of income tax collection is highly inflationary, and has provided a great deal of the pressure for constant wage increases."

Taxation Without Limitation

(A continuation of the discussion beginning on page 141 of the May issue.)

By RINGGOLD ARDEN

A GREAT MANY experienced lawyers believe that the payroll deduction scheme for deducting income taxes is unconstitutional, and that if it can ever be brought before an unbiased Supreme Court, it would be so declared.

This method of collecting taxes forces employers to undertake a considerable amount of expensive bookkeeping, and some large concerns have had to install whole departments, with expensive, specialized equipment for making out pay checks and pay slips, to take care of these tax deductions. The employer is therefore forced to serve the federal government without pay, and to add insult to injury, if this unpaid servant of the government is the least bit late in turning this tax money over to the Collector of Internal Revenue, he is assessed a fine for not doing this thankless task as expeditiously as his master, the government, demands.

There is nothing to prevent the federal government from collecting these taxes at about the same, or perhaps less, expense than the employers have to undertake in collecting them. If this payroll deduction scheme were abandoned and each employer gave his employee his full wages, and the government required that these taxes be paid at the Post Office, or some other convenient place each week, the amount of taxes collected should be just as great as at present—but the inflationary factor in this tax would be removed.

It would in fact be removed so thoroughly that politicians quail at the thought of what would happen if millions of working persons were brought to a full realization of just what it means to pay the taxes which are now soothingly deducted from the pay checks before they get them.

If a man had to cash his check and then count out real money through the wicket of the tax collector, he would know full well how much he was being taxed, and if taxes went up, his pay check would not go down as it does under

Loom De-Synchronizing Reduces Vibration

All of us have been in a weave room and have felt the building sway so much that we have wondered why the building does not collapse. This fact has worried mill owners, and huge fortunes have been spent to strengthen and reenforce buildings so that they will safely withstand these forces.

This problem is of no great concern in such mills where the looms are located on the ground floor. There are, however, a great many of the older mills where looms must be placed on the second, third, or fourth floors. It is these mills that must find a solution to the problem.

The trouble is definitely due to a great many looms being exactly in step as far as their lay positions are concerned.

The apparatus involved is:

a. A magnetic control switch for each loom. This is in place of the present manual switch.

b. A maintained contact "Start-Stop" master switch for each loom. This switch may be mounted directly on the loom.

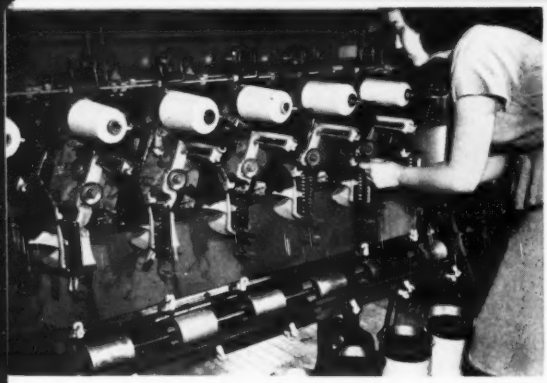
c. A 12-volt rated switch for each loom, operated by the loom shipper rod. This switch is closed when the loom is in operation.

d. A 25 VA warp stop transformer for a pair of looms. If the present looms have warp stop transformers, one of these may be used.

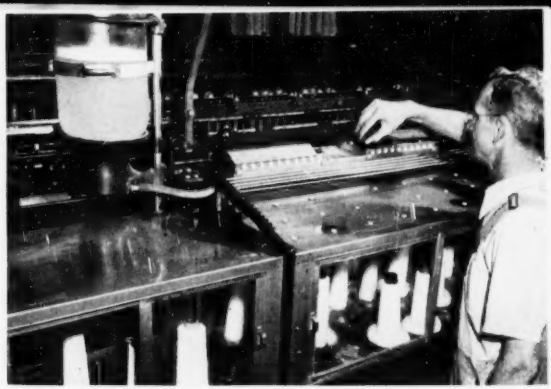
e. One single pole, normally closed contact, 12-volt coil, relay for each loom. These relays must have a 600-volt rating for their contact since they handle the coils of their respective loom switches at line voltage.

f. One crankshaft-operated switch for each loom which must be the equivalent of a single pole double throw switch with a neutral or off position.

Brief of address by F. D. Snyder of Westinghouse Electric Corp., to conference on Electrical Application for the Textile Industry, May 1, Atlanta, Ga.



COMPARATIVE CONING OIL TESTS were run by this throwster in an effort to improve quality. Sunoco Fibrlub L-220 gave the finest results. It lubricated better, reducing breakage. Because it does not change in viscosity or composition, Fibrlub L-220 eliminated preferential pick-up. Along with economies in production, it brought substantial savings in process oil costs.



DELAYS ELIMINATED. A well-known knitter had trouble with an expensive trough oil. It would not form stable emulsions and it frequently caused unlevel dyeing, because it would not scour out thoroughly. Changing to Sunotex TS-48 proved the answer to both problems. In addition, Sunotex TS-48 helps him get cleaner, rounder, more uniform stitches.

MILLS FIND 3 SUN PROCESS AIDS MEET ALL NYLON HOSIERY NEEDS

Through the years, working in close collaboration with the technical staffs of nylon throwsters and knitters, Sun Oil Company research groups have developed three process aids which meet all fiber lubrication requirements of the full-fashioned hosiery industry. Each serves a particular purpose: Sunoco Fibrlub L-220 is a coning oil for throwsters; Sunotex TS-48 a trough oil for knitters of 30-and-higher-denier hose; Sunoco Fibrlub 45 a special wick oil for knitters of 15 and 20-denier hose.

That there are real advantages in using these "Job-Proved" process aids is obvious from their extensive use in plants throughout the East, the South and Canada. For information about how they can help you produce better nylons faster, and more profitably, fill in the coupon below.

SUN OIL COMPANY, Dept. TI-6, Philadelphia 3, Pa.

We would like to consult a Sun representative in reference to ☐ coning oil, ☐ trough oil, ☐ wick oil.

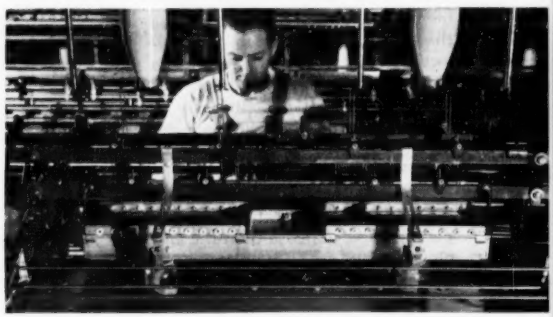
Name_____

Title_____

Company_____

Street_____

City_____ Zone____ State_____



A COMPLETE LINE OF PROCESS AIDS. In addition to nylon-process aids, Sun Oil Company produces textile-process aids for use with wool, synthetics, blends of wool and synthetics, cotton and cordage. Sun's technical staff, backed by Sun's extensive research facilities, is at your service for consultation on any processing problem you may have.

WEAR HAS BEEN NEGLIGIBLE on needles and carrier tubes ever since a prominent knitter of 15 and 20-denier hose adopted Fibrlub 45 as his wick oil. He says that this product, though less costly, is superior in thread lubricating qualities to most of the oils he used before. It feeds readily through the wick and is delivered in sufficient quantity to the thread.

SUN INDUSTRIAL PRODUCTS

SUN OIL COMPANY, PHILADELPHIA 3, PA. • SUN OIL COMPANY, LTD., TORONTO AND MONTREAL

SUNOCO®

"Make Research Work" Heard Tells Phi Psi Men

Staff Report

"We can't make a move without research affecting it," M. Earl Heard of West Point Manufacturing Co., president of Phi Psi national professional textile fraternity, told delegates to the organization's 49th annual convention held May 1-3 at Clemson, S. C.

"Research is a state of mind," he said. "We must be always cognizant of the fact that there is a better way to do all things."

Urging Phi Psi men as they leave their schools and go into industry to have openness of mind to make research work, Mr. Heard emphasized the fact that textile schools should instill in all students an appreciation of research.

A full program had been arranged for the three-day gathering by the fraternity's new executive secretary, John T. Wigington of The American Cotton Manufacturers Institute Fiber Laboratory at Clemson.

Following a tour of Excelsior Mill No. 2 at Clemson on Thursday morning, the delegates attended a luncheon in the Saber Room of the Clemson House.

In the afternoon they visited the Clemson School of Textiles, toured Utica & Mohawk Division of J. P. Stevens & Co., Inc., and visited the U.S.D.A. Fiber and Spinning Research Laboratories and the ACMI Fiber Laboratory.

The fraternity's Iota Chapter, located at Clemson College, was host to the delegates at a reception in the late afternoon.

Climaxing the day's activities was the conferring of an honorary membership on Roger Milliken, president of Deering, Milliken & Co., Inc.

Grand council officers met with representatives from the student and alumni chapters on Friday morning and heard annual reports of their activities.

Left to right: seated—**M. T. Farley**, grand treasurer of Phi Psi; **Dr. H. M. Brown**, dean of Clemson School of Textiles. Standing—**Robert C. Jackson** of ACMI; **M. Earl Heard**, grand president; **John T. Wigington**, grand executive secretary; and **James L. Giblin**, grand vice-president.

On Friday afternoon tours were made through the Gerrish-Milliken rayon weaving plant and Excelsior Mill No. 4 woolen finishing plant at Pendleton.

Following the annual banquet in the evening at which Arthur R. Thompson of Charlotte alumni chapter entertained with his feats of magic, honorary membership was bestowed on Robert C. Jackson, executive vice-president of American Cotton Manufacturers Institute, Inc.

Others who have been given honorary memberships in the fraternity during the past year include: Fred C. Scholler, president of Scholler Bros., Inc.; Sam H. Swint, president, Graniteville Co.; J. L. Hutcheson, Jr., president, Peerless Woolen Mills, Inc.; William H. Ruffin, president, Erwin Mills, Inc.; J. C. Cowan, president, Burlington Mills Corp.; and J. B. Gaither of the School of Textiles, N. C. State College.

Phi Psi was founded at Philadelphia Textile Institute in 1903 with the objectives of (1) promoting good fellowship among men of the textile schools, (2) encouraging a high standard in textile work, and (3) assisting in the advancement of its members.

More than 3000 members are on its active and alumni rolls.

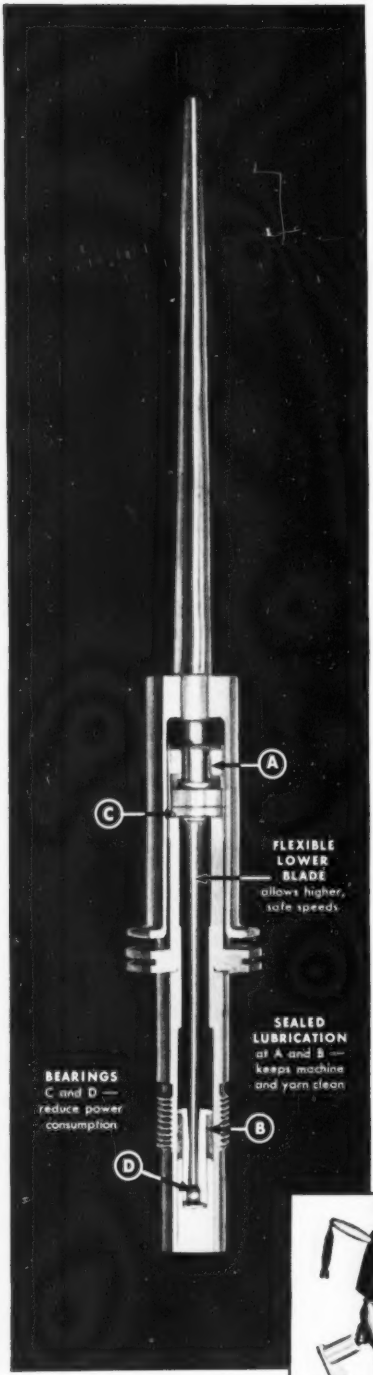
Grand Council officers other than Mr. Heard and Mr. Wigington are: James L. Giblin, New Bedford (Mass.) Textile Institute, vice-president; Mortimer T. Farley, Farley-Harvey Co., Boston, Mass., treasurer; and E. Jack Lawrence, Howard Bros., Atlanta, Ga., business manager for "Phi Psi Quarterly."

The fraternity's 50th anniversary convention will be held at Philadelphia Textile Institute.

the present system, and he would be more inclined to blame the federal government for increased taxes than to strike against his employer for more money with which to pay these.

This payroll deduction scheme is highly inflationary, and has provided a great deal of the pressure for constant wage increases.

Admittedly, the old system of collecting taxes next year on money received this year was an absurdity from the time the tax basis was broadened to include people of small incomes. They simply would not save any money for paying their taxes, and each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Helpful Tips on Electrical Maintenance

Speaking to the conference on Electrical Application for the Textile Industry, in Atlanta, Ga., May 1, Dan McConnell, plant engineer of Cone Mills Corporation, Greensboro, N. C., offered the following helpful comments on systems used at those mills when dealing with electrical systems.

Our maintenance men carry Wigginton Testers and never go in on a circuit with their hands or a tool without testing first. We also have several of the smaller tong-test ammeters that have been quite satisfactory for hip-pocket carrying.

An Addressograph punch to make metal tags to mark machines with job number and file reference numbers, and also to make tags for valves indicating what is in the pipe lines where it is difficult to paint-code the lines, is useful.

Some of the new air-drying slashers run on the fan motors in a very high ambient, and we have had some trouble with them; doing some insulating and ventilating in the motor compartments cured the trouble.

Experience with transmitter-type loom drives has shown that the linkage adjustments on these devices are quite critical if you want good bearing life, and the responsibility for checking this setting and keeping it properly adjusted should be definitely placed when these drives are installed.

Since our power system remodeling is now almost complete we will start shortly on a project of numbering our feeders and control equipment. Each feeder leaving a unit substation will be numbered 1-2-3-4 in Arabic numerals. The first disconnect switch or section breaker coming off this feeder will be lettered A, the second B, and so on. The first control device behind the section breaker will be numbered as 1-2-3. The number appearing on a magnetic switch on a spinning frame for instance would probably read 3C4, meaning it was magnetic switch No. 4 fed by section breaker C from substation feeder No. 3. This helps a maintenance man as he can pull disconnect switch C and know for sure how much he has cut off and that he is working behind an open switch.

In working with some fairly complicated schematic wiring diagrams recently we found it useful to mark them up in a manner that essentially gives co-ordinates for each device shown on the schematic. The particular schematic in question had some a-c power wiring at top, some d-c wiring in the middle, and some d-c control wiring on the bottom part of the figure. At each horizontal line in the a-c part of the diagram we put down a Roman numeral, and for each feed taken off inside the outer borders of the figure we put down a letter subscript as "A", "B", and so on.

In the d-c power end the same thing was done using capital letters without a numerical subscript, using small letters for subscript on connections taken off inside the edges of the figure. In the d-c control end where each line came to the left of the figure an Arabic numeral was put down, with letter subscripts for each connection taken off a given line inside the outer borders of the figure. Above each contactor operating coil we put in the number of normally open and normally closed contacts appearing on each contactor and the levels in the drawing at which these contacts occurred.

The main use of this kind of marking has been to indicate to the maintenance man where he can look for the various contacts when he is chasing trouble through the schematic. On one of the control drawings we found it expedient to list the voltage drops across the various elements of the control so a fast check through these points could help us localize the trouble we were looking for. Samples of these drawings are available for inspection.

year the working people were paying last year's taxes out of this year's income.

When the income tax amendment was first adopted, this form of tax was supposed to be an annoyance imposed only on the very rich, or those quite well-to-do. From about 1914 until 1918, the income taxes started with an income of $5,000 a year, which was very important money in those days. Very few people made as much as $5,000 a year, which was then equivalent in living standard to about $20,000 today. The income tax was negligible until the income became very large, and the people that made that kind of money could always dig up their taxes without the slightest difficulty.

The necessities of World War I caused the tax basis to be broadened to include practically everyone, and the rates were increased so that a day laborer might pay more tax than a wealthy man previously had to pay. Under these circumstances, it was absurd to stick to the old method of collecting taxes, and the pay-as-you-go system was long overdue when it was adopted.

The system need not be affected materially by abandoning the payroll deduction plan and requiring people to pay their taxes weekly at some designated collection point. Many people contend that this is impractical, and that the government would lose billions in taxes. There is no reason why it should. The telephone company collects its bills, and the light and water companies and the gas companies seem to have no serious trouble in collecting what is due them. Surely, as impressive an organization as the Government of the United States ought to be able to collect money on as efficient a basis as The Bell Telephone System.

ANY TAX which is inflationary is an evil tax. The sound taxes are

(*Continued on page* 192)

Report on China's Silk Industry

China's silk industry is making a comeback, despite the fact that the United States is no longer a major outlet for its exports. Substitute markets are being developed.

By JOHN CARDEW

ONE THING made clear at the recent Moscow economic conference was that China is making a determined bid to find substitute markets for her silk now that the United States (formerly by far the biggest buyer of this traditional Chinese export) is no longer providing a mainstay for an important industry.

Chinese delegates to the conference consistently listed silk as one of the commodities that could be supplied in growing quantity to Western Europe and claimed that the quality had been considerably improved in the past two years. They were able to point out that silk has for some time been playing an important part in trade exchanges between China on the one hand and the Soviet Union and the countries of Eastern Europe on the other.

This, together with the fact that the Chinese have given considerable prominence to silk exhibits at trade fairs in Europe and Asia during the past 12 months, seems to indicate that the Peking government is taking up the challenge so successfully thrown down by Japan half a century ago.

At the beginning of the twentieth century, China and Japan were exporting approximately equal quantities of silk, and China attained a peak export figure of 10,000 metric tons [2204.6 lb=1 metric ton] of the raw product. During the 19th century, tea and silk were the leading items of China's export business and brought some of the earliest U. S. traders to the China coast.

The Yankee clippers that made the trip around Cape Horn in search of tea and silk were at times so hard pressed to supply commodities in payment that ships from New England eventually went to the length of carrying out ice in preference to going empty and sold it in south China. (The present Icehouse Street in Hongkong is a relic of those days.) The trade then started grew to a considerable volume, and until recent years the U. S. was taking something like two thirds of China's silk exports (through Hongkong and Japan). France and Japan were the two other principal customers.

By 1949 China's silk export trade had dwindled to a mere 400 metric tons a year, and although Japan was exporting only a fraction of the 1934-38 volume (over 30,000 metric tons), she was still contributing to the world market more than seven times as much as China. The following United Nations table shows the decline in silk exports from both countries:

RAW SILK EXPORTS
(Thousand metric tons)

	1934-38	1948	1949
China	4.7	0.4	0.4
Japan	30.2	5.0	2.9

Total output in Japan in 1950 is believed to have been about 10,000 metric tons, or the same level as 1949, and in China some 5,000 metric tons.

Since the establishment of the present Chinese government, efforts to restore the silk industry have concentrated largely on the methods that gave Japan such a lead—namely, more scientific production techniques and government assistance to raise output and improve marketing. Chinese silk is intrinsically superior to the Japanese product and this, coupled with the fact that policy in China is to increase simultaneously both home consumption and exports, clearly suggests that in a comparatively short time Chinese silk will be playing a much more important part in the world textile trade than has been the case for many years.

Sericulture is widespread in agricultural China, major producing areas including Kwangtung (which alone in 1930 was producing one seventeenth of the world's raw silk), Kiangsu, Chekiang, Anhwei, Hupeh, Hunan, Szechuan and Honan.

Hangchow in Chekiang Province is well known for its silk goods such as satins, crepe, brocades, and soft silks; and Shantung and Honan are noted for their pongee output which is woven from tussah silk. The white silk which forms a large part of China's exports comes from the Shanghai area and from around Canton.

At the present time sericulture is being widely extended in the Northeast (Manchuria) where there is a rapidly growing pongee silk industry. The worms which produce pongee are fed on oak instead of mulberry leaves, and the oak trees that cover mountain sides in a number of Manchurian provinces have made possible the expansion of Northeast silk production to a point where it is now accounting for more than half

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TEXTILE MACHINE WORKS • READING, PENNA.

China's pongee silk output.

By the end of 1950 China's silk industry was showing signs of a definite revival. Bumper harvests were gathered in most silk-producing areas that year, and in a number of cases yields were the highest for many years. Aid to peasants in the form of improved breeds of silkworms made possible a considerable initial recovery in the industry since in the past as much as one half of the carefully cultivated mulberry leaves were fed to diseased worms and so wasted.

The total output of silkworm cocoons in 1950 was some 32,000 tons, which would have yielded over 5,000 metric tons of raw silk, or about 25 per cent more than China exported in 1938. Last year planned production was 15 per cent more domestic cocoons and nearly 60 per cent more wild cocoons. These targets, like those of the previous year, were drawn up largely on the basis of export demands from the Soviet Union, which in 1950 took between 35 and 40 per cent of all China's silk exports.

The harvest was again good last year and in the Southwest, the second largest silk growing area in China, the crop enabled 700,000 kilograms [1 kilogram=2.2046 lb] of silk to be reeled, a 36 per cent increase over the previous year and some 300,000 kilograms more than in the last year under the Chiang Kai-shek government. It is in the Southwest, in Yunnan Province, that the largest silkworm breeding center in China is being operated by a state corporation. The center has nearly 350 hectares [1 hectare=2.471 acres] of mulberry trees and is supplying silkworm eggs to breeders over a wide area.

This year an output of silk equaling that before the beginning of the war against Japan (approximately 14,000 metric tons a year) is the goal. Favorable factors for the realization of this target are the two good harvests of 1950 and 1951, which have given peasants more capital, and the progress that has been made by government experts in popularizing improved breeds of silkworms.

Both state and private mills are engaged in reeling and weaving and in many centers, such as Soochow, silk weaving is a main handicraft industry and well developed. Last year this East China city had 134 silk weaving factories with over 1,000 electric and 400 wooden looms. Much of its output of nearly 1,000,000 yards of silk piece goods and over 70,000 silk coverlets in 1950 went to China's remote Northwest and Mongolia as well as the Soviet Union and Eastern Europe.

Latest figures available show that China's silk exports to the last-named markets showed a 50 per cent increase in the first part of last year. It is clear, however, that the Soviet Union, Eastern Europe, and Eastern Germany are not likely to absorb all China's silk exports in the future, and a drive to secure markets in the East, Western Europe, and the British Commonwealth seems certain.

Excessive Time in Tumble Dryer Ruined Elastic Webbing

A report by Robert F. Cooper of the elastic web committee of the Underwear Institute provided information on the damage done to the elastic webbing in men's and boy's shorts, by running the garments in a tumble dryer for an excessive time. His report was given at the annual meeting of the Institute.

At just about the time neoprene rubber was supplanted by natural rubber, a very serious failure in rubber elasticity began to be noted in top elastic on men's and boy's shorts. At first it was assumed that this was caused by the deterioration of synthetic rubber, but as it continued it was found to be true of elastic waist bands containing 100% natural rubber.

If this condition were allowed to grow in magnitude, it could easily ruin the knit support as well as the boxer underwear business. Let's look briefly at what has been done to cure this condition in order to see what further steps should be taken.

At that time it was not known what was causing this complete loss of elasticity, so several independent laboratories were contacted and asked to duplicate this condition. Strangely enough, they were unable to do so. For instance, on the assumption that one or several of the strong new detergents were causing the trouble, elastic was boiled in them with no apparent bad results. It was thought that strong household bleaches might be the cause, but upon boiling in strong solution, the cotton fabric was completely eaten away with still no bad results to the elastic thread.

Consumer returns were investigated to determine actual conditions to which these garments were subjected. Nothing partially enlightening came from these investigations. In short, the industry as well as the commercial laboratories were stumped.

The help of the American Institute of Laundries was enlisted, with shockingly quick results. The actual laundry process had nothing to do with the condition, but it didn't take long to find that excessive time in a tumble dryer completely ruined elastic webbing.

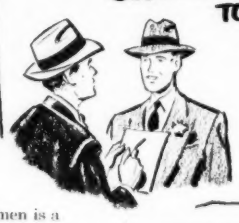
After much research, the Institute sent bulletins to all of its membership warning against excessive time and heat in the dryers. At the same time, several of the large rubber companies started research on a heat resistant rubber thread. This has now been thoroughly developed to the point where all of the rubber manufacturers are now making heat resistant thread of one kind or another. Incidentally, this new thread will stand up at least 25 times as well as the best of the old thread according to test results.

FIBER FARE..... from Du Pont

FINGER OF LIGHT points to LIGHT-WEIGHT clothes

In this test conducted by Du Pont technologists, a beam of light is directed at yarn closely wound around a frame. By measuring exactly how much light gets through, a photoelectric cell shows the bulk or "covering power" of the fiber. Man-made fibers, by producing greater strength and high bulk, have helped in the development of men's clothes that are *pounds* lighter than those worn 25 years ago.

-SURVEYS PROVE WRINKLE-RESISTANCE TOP SELLING POINT FOR "DACRON"

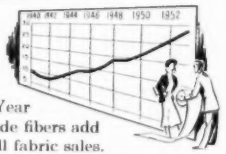


Men's enthusiasm for summer suits of both 100% "Dacron" and "Dacron"-wool blends was registered recently when interviewers talked to 1600 men who wore them. In addition to the wrinkle-resistance feature, qualities of press-retention, ease of care, appearance, feel and coolness scored high.

"BEST-DRESSED" WOMEN ARE EVERYWHERE TODAY!

One of these women is a society leader and the other is a stenographer. Thanks to improvements in fibers, fabrics and clothing design, it is not possible to tell them apart. The man-made textile industry has contributed to a living standard that means greater abundance, better style . . . for everybody.

BIG PART OF A GREAT BUSINESS



. . . *Getting bigger all the time!* Year after year, the sales of man-made fibers add up to a greater percentage of all fabric sales. The figure was less than ½ of 1% in 1920, 10% in 1940, 22% in 1950, and should pass 28% by 1953. These percentages stand for a lot of sales dollars, for shoppers spend more on fabrics than on any other item except food.

HELP HER TAKE THE GUESSWORK OUT OF SHOPPING

The shopper shouldn't have to guess about the fiber content of a garment. It's good business when she's *told* —by salespeople—and *shown*—by label—just what the fabric's content is, and how it will perform as to wear, comfort, washing and cleaning. Good labeling and sales instruction will be sure to sell today's customer—more fiber-curious now than she has ever been before.

RAYON
DACRON* polyester fiber
NYLON
ACETATE
ORLON* acrylic fiber

*DU PONT TRADE MARKS

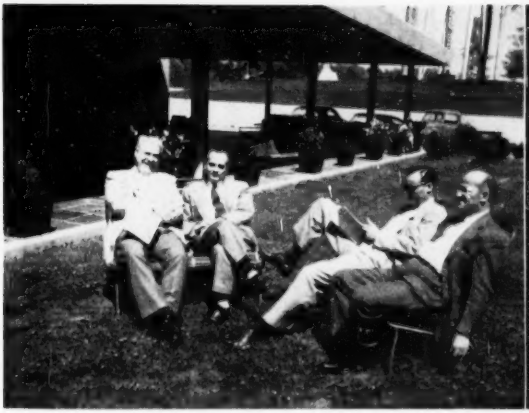
Textile Fibers Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware. Du Pont makes only the fibers—not the fabrics or finished products shown.

DU PONT

150th Anniversary

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

DU PONT FIBERS ARE PLANNED FOR BETTER LIVING



AT FIBER SOCIETY. Session in the sun, **John Wigington** of ACMI; **Jay Goldberg** of Stevens; **George Buck** of National Cotton Council; and **Thomas Kerr** of the Plant Industry Station, Beltsville, Md.

Session in the shade, **James Barnes** of Kendall; **Walter Hamburger** of Fabric Research; **L. W. Rainard** of Alexander Smith; and **Richard Kropf** of Belding Heminway.

Research Must Pay Its Way

Staff Report

THE FIBER Society met at Clemson, S. C., April 15-17. Highlights from papers of those addressing the society are presented in the following paragraphs:

Research Must Pay Off. R. T. Kropf, vice-president and director of research, Belding Heminway Co., Inc., said that there is nothing sacred about research. It, just like any other function of a business, must pay its way and prove its worth. Research men must recognize that they must sell management on the direct dollar value of the work they are doing and must weigh the returns on research investment as carefully as returns on investment in new machinery or buildings.

Cavitomic Cotton. Cotton damaged by micro-organisms or by enzymes of these organisms does not process properly in the mill. John Elting, research director of Kendall Mills, has been studying this type of damage for several years, and he reported that a mill test showed cavitomic cotton gave more than twice as many ends down in spinning. Kendall cotton buyers apply a pH test to bales being purchased, cavitoma being much more prevalent in cotton that tests highly alkaline.

Radioactive Tracers in Cellulose. Glenn Greathouse, a research chemist, said that he had been working on the basic structure of cellulose and its decomposition, using radioactive carbon as a tracer. He hopes his experiments will lead to a better understanding of the way cellulose is formed in plants and the way in which it breaks down.

Denier Measuring Instrument. Frank Nistico and B. S. Sprague of Celanese Corp. of America, told members that their research department had developed a new instrument, an adaption of the Viviani Tester, which will measure the denier of yarns continuously and economically. Resistance changes, as the yarn is run through the machine, measure denier and record it on a Brown recorder. The device is applicable only to filament yarns.

Warp Streaks in Synthetic Fabrics. E. H. Olson, H. F. Hume, and C. E. Reese, of DuPont, have developed a "Streakmeter." This instrument, which can be built from commercially available equipment for something around $700, has in it a photoelectric cell which examines each yarn in a piece of woven fabric.

By measurement of light reflection, it will indicate uniformity of color and surface of yarns and the spacing between ends. Streaks in

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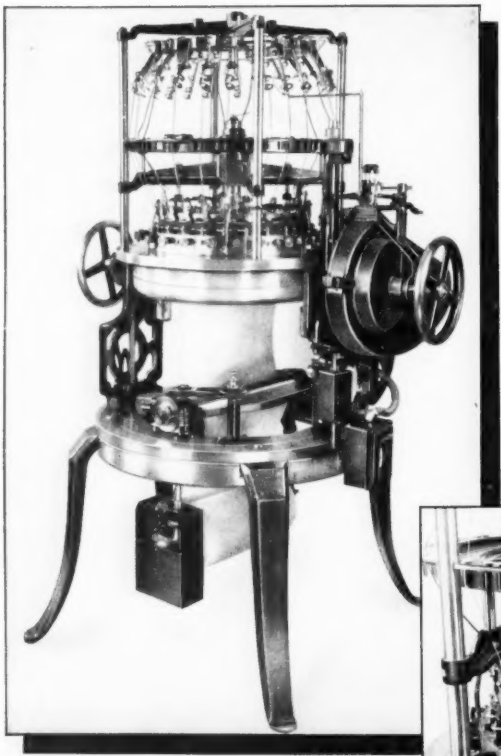

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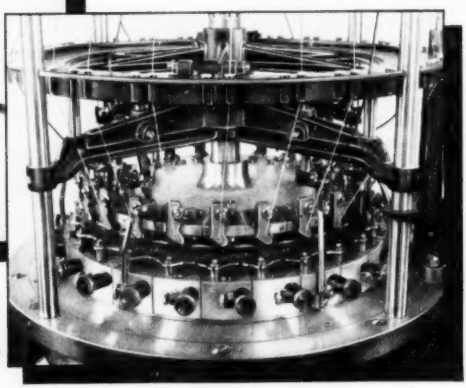
Increased production for unit floor space . . . Increased production for small additional power consumption . . . Depth of pattern is greater where a different colored or type of yarn is used in relation to other yarns . . . Cone holders arranged so that the tail or last part of the yarn on a cone is tied to the beginning of the new cone — the machine thus is not stopped at the exhaustion of first package but continues operating from new package.



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NORRISTOWN — PENNSYLVANIA

woven fabrics are caused either by variation in surface or color of yarn or by variation in spacing, and the chart produced by this meter will show whether it is the spacing or the yarn itself which is causing the streak. According to this paper, variation in spacing causes a more easily discernible streak than variation in color.

Textile Developments at Clemson. Dean Hugh M. Brown, of the Textile School, Clemson College, explained and demonstrated to research men attending a meeting of the Fiber Society, a number of mechanical improvements to textile experiment which may soon be aiding the textile manufacturer. Among these improvements were:

A loom driven with eccentric gears so designed that the time required for forming the shed and beating up is reduced while the time allowed for shuttle flight is maintained. This would permit the operating of looms at higher picks per minute without increasing shuttle speed and the troubles arising therefrom.

A hydraulic warp release device using metal bellows to actuate a mechanism to drop the whip roll every time the loom is stopped, thereby reducing warp tension and eliminating most stop marks.

A pneumatic warp tension control, also using metal bellows, which can be applied to looms in groups, thereby maintaining equal warp tension for the entire group. This same principle may be applied to drawing, roving, or spinning frames to give equal roll weights.

A new type of loom temple made from a tenter clip. This temple does an excellent job of holding the cloth at the selvage. If released, it automatically recaptures the selvage.

A tensile tester which gives an index of strength and strength uniformity as yarn is run through it. This adaption has been incorporated in a uniformity meter so that as the yarn runs through it, the chart indicates yarn strength rather than yarn uniformity.

Extra, false twist can be inserted between the rolls and the thread guide with an improvement made on a device which the school has been working on for some time. This twist increases the strength of the yarn right up to the nip of the rolls and is claimed to greatly reduce ends down in spinning.

Dyeing of Merinova (Protein Fiber)

The dyeing of Merinova — a new casein, protein fiber manufactured by Snia Viscosa, Milan, Italy — was recently studied in the DuPont technical laboratory.

The fiber manufacturer's claims for Merinova are: It has the same characteristics as wool; it can be dyed together with wool, especially in blends of 25-50% of the protein fiber; it can be bleached to a good white; it is 10% lower in breaking strength than wool; the crimp is good; it is a distinct improvement over the former Italian protein fiber, Lanital.

Acid, chrome, and direct type colors are recommended for dyeing Merinova.

Dyeing 100% Merinova. Snia Viscosa recommends that 100% Merinova in staple and top form be dyed as follows: Start dyeing at normal temperature (60-65 F); add dyestuff slowly to bath; raise temperature in ½ hour to 170-175 F and dye at this temperature for ½ hour; exhaust dyebath with acetic or formic acid (do not use sulfuric acid).

For chrome colors, use formic acid with potassium bichromate.

Add to the dyebath Igepon T (or a similar product) in a proportion of 1.0 to 1.5%. Wash in the same vessel.

Maximum drying temperature should be 175 F (higher temperatures might harden fiber).

Dry dyed fiber in box-dryer; air-drying is recommended for tops.

Merinova-Wool Blends. Uniform dyeing results are said to be obtained on both fibers with acid and chrome colors. Procedure recommended by Snia Viscosa: Wet out material; prepare dyebath with 10% sodium sulfate, 1.0-2.0% acetic acid, and necessary quantity of dyestuff. Start dyeing at 60-65 F. Open steam, bring to boiling point in 30 minutes; shut off steam and after 15 minutes add 2% formic acid. Continue dyeing for another 30 minutes at temperature near boiling point.

For chrome colors, cool bath to 155 F and add bichromate in amount of ½% of dyestuff used, but not to exceed 2%.

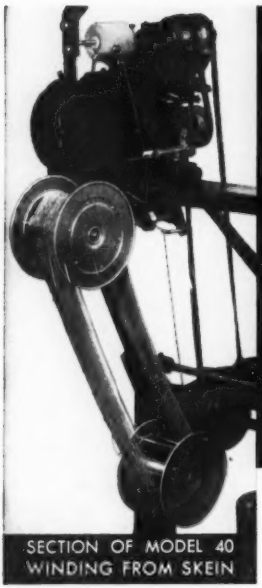
Increase temperature to 195 F for ½ hour; wash and dry at 175-185 F.

Merinova-Wool-Viscose Rayon Blend. Use union dyestuff. All colors do not cover fibers uniformly; select carefully. Procedure: Wet out material and start dyeing at 60-65 F. Dyebath — 1.0 to 1.5% Igepon T (or similar product), 10.0 to 30.0% sodium sulfate dyestuff. Raise temperature in ½ hour to 200 F; shut off steam and dye for ½ hour. Same procedure for drying as recommended for Merinova-wool blends.

The DuPont study covered the dyeing of Merinova and wool separately and also in a 50-50 blend of the two fibers, using acid, chrome, and direct colors.

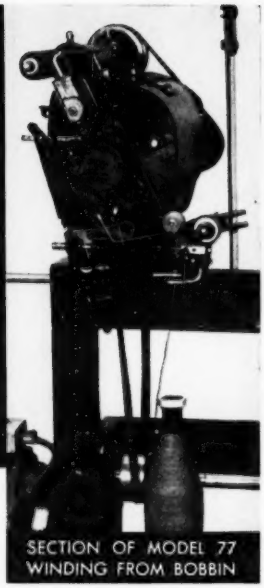
In dyeing 50-50 Merinova-wool blends the level dyeing acid colors gave the best unions, while direct, milling, and chrome colors dyed Merinova appreciably to much stronger than wool. Fastness tests indicated that the level dyeing acid colors applied to this new protein fiber were inferior in alkaline perspiration, washing, and light as compared with results on wool. Milling colors were about equal in these properties on both fibers. Direct and chrome colors resulted in equal perspiration and washing fastness on the two fibers with light fastness on Merinova inferior to that on wool.

Dyeing methods employed in the DuPont technical laboratory studies are given in "The Technical Bulletin" for March, 1952.



SECTION OF MODEL 40
WINDING FROM SKEIN

Carpet Mill will save about $17,000.00 per year with Foster heavy duty winders



SECTION OF MODEL 77
WINDING FROM BOBBIN

One leading carpet mill, which has recently installed Foster Model 40 and Model 77 Winders, estimates that it will save approximately $17,000.00 per year by this move. Here's why: —

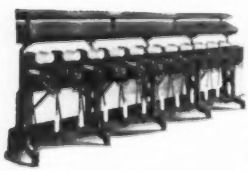
1. **These Winders will give about twice as much production per hour as the old spoolers.**
2. **They also put twice as much yarn on a package, although the package is the same diameter as a spool.**
3. **They will cut doffing time at the winder in half.**
4. **They will cut yarn carrier costs to a mere fraction of what they were before, using inexpensive paper tubes in place of expensive and hard to get wooden spools. The paper tube packages fit in the same creel which is used for spools.**
5. **The greater supply of yarn on the Foster package means long runs and much less creel doffing at the loom.**
6. **The number of packages to handle is reduced by about 50%.**

SALE YARN MILLS — serving the carpet and other industries profit by installing Foster Heavy Duty Winders because their product is thus made more salable, offering important savings as described above.

Tell us your coarse yarn winding problem and let us make recommendations. No obligations.

Facts about MODELS 40 and 77

1. Model 40 handles 30/2 to 8/40 yarns; Model 77 from 8/3 to 8/100.
2. Model 40 package — up to 6½" traverse, Model 77 package — up to 8" traverse.
3. Both machines can be equipped to draw overend or by unrolling from bobbins or from skeins on runner reels.
4. Runner reels for skeins are light in weight, but give long life and are equipped with ball bearings.
5. Ball bearing spindles and drive shaft are standard on Model 77 and optional on Model 40.
6. Spindles driven by individual quarter turn belts, insuring constant spindle speed.
7. Arbors for various types of cones and tubes furnished for both machines.
8. Model 40 can be equipped to wind multiple end braider tubes.



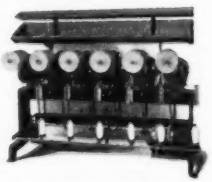
FOSTER MODEL 40

FOSTER MACHINE CO.

WESTFIELD, MASS.

Southern Office, Johnston Bldg., Charlotte, N. C.

Canadian Representative, Ross Whitehead and Company Limited, University Tower Bldg., 1475 Mountain St., Montreal, Que.; *European Representative*, Muschamp Taylor Ltd., Ashton-Under-Lyne, England.



FOSTER MODEL 77

Georgia operating executives talked about:

Oil In Ginned Cotton
New Opening Equipment
Cotton Maturity Tests
Picker Modifications
Lap Uniformity
Licker-In Speeds
Nylon Trumpets
One-Shot Lubrication
Picker Setting for Rayon
Three-Over-Four Drawing
Roving Frames
Cleaning In Spinning
Double Apron Spinning
Synthetic and Rubber Aprons
Overhauling Spinning Frames
Aprons on Roth Long Draft
Roll Picking
Determining Quill Requirements
Twister Creel Spindles
Creeling Roving
Snick Plate Settings on Spoolers
Beam Changeover on Warpers
Overhauling Winders

Technical discussion meeting in Atlanta

Carding and Spinning Practices

Staff Report

TWENTY-THREE Georgia mills evaluated the 1951 cotton crop in terms of oil content, trash, fiber fineness, strength, and staple length; however the data presented on this subject at the annual spring meeting of the Textile Operating Executives of Georgia may be considered inconclusive. Differences in origin of the cotton and in other details indicated a lack of uniformity in techniques of evaluation and mill requirements.

Two answers to the question indicated that the 1951 cotton crop was better than the 1950 crop; two, that it was of poorer quality; three, that 1951 cotton was stronger; ten mills noted no difference; six mills found more oil present in the 1951 crop; and two mills found that the average staple length was shorter than the 1950 crop. One mill noted .5 to .8% more oil in the 1951 cotton.

THIRTY Georgia Mills, operating 1,561,026 spindles, answered questions regarding their practices in carding and spinning. The open forum discussion meeting was held on Saturday, April 26, 1952, in the Harrison Hightower Textile Building, Georgia Institute of Technology, Atlanta, Ga.

New Opening Equipment. Mills were asked to give their experience with recently developed cotton cleaning equipment, including gin-saw type opener, air-jet type cleaner, and Superior preopener. The most significant answers are as follows:

Mill A. A tabulation of the data obtained at this mill appears in the box on page 147.

Mill C. We have an air-jet type cleaner. Our test was conducted on cotton that was pre-cleaned prior to dyeing. On the regular process the stock flow was as follows: blending feeders; first Superior; second Superior; then rebale. The stock was then dyed and re-opened through blending feeders, first Superior cleaner, and

HIGHER SPEEDS lower operating costs

Consistent Quality

THE WPF&M MULTI-CAN SLASHER

with 5, 7, 9, or 11 30" CYLINDERS

The WPF&M Multi-Can Slasher is designed to produce consistent quality warps from a wide range of natural or man-made fibers, at high speed and low operating costs.

Furnished with either 5, 7, 9, or 11 thirty-inch diameter cylinders, the Multi-Can Slasher can be adapted and equipped to fill any mill requirements.

The polished, stainless steel cylinders, with welded-in steel heads, can be operated at pressures up to 35 psig. Rotary packless steam joints and sealed, self-aligning anti-friction bearings provide smooth, trouble-free operation. Each cylinder is equipped with vacuum valve, thermometer, condensate trap and flexible pipe connections. Temperature control can be provided for manifold, group or individual cylinder control. Either mechanical or electrical type tension control between cylinders and size box, and head end and cylinders are available.

The WPF&M Multi-Can Slasher is one of the complete line of modern Slashers manufactured by the West Point Foundry & Machine Company—specialist in Slasher Room machinery and equipment.

We will be glad to furnish you with complete details without obligation.

AUTOMATIC, POSTIVE DRIVE *eliminates friction clutch and power losses. Tension can be preset and held constant, beam after beam.*

WPF&M WARP PREPARATION MACHINERY

STANDARD 2 and 3 CYLINDER SLASHERS
MULTI-CAN SLASHERS
WPF&M HI-SPEED 4 CYLINDER SLASHERS
CALLAWAY SAMPLE SLASHER

SLASHER MODERNIZATION EQUIPMENT

HI-SPEED HEAD ENDS WITH STRETCH CONTROL
STANDARD WPF&M HEAD ENDS
MULTI-MOTOR DRIVES and CONTROLS
TEMPERATURE, SPEED and TENSION CONTROL DEVICES
HI-SPEED SIZE BOXES, MODEL 50 SIZE BOXES and STANDARD SIZE BOXES
SIZE KETTLES and EQUIPMENT

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA

second section of picker.

Flow of the sample was as follows: blending feeders; first Superior; second Superior; beater section; Super-Jet cleaner; and rebale. The stock was then dyed and re-opened through blending feeders and second section of picker.

Results of the test are as follows:

	Super-Jet	Regular Process
Staple	1"	1"
Fineness	3.8	3.8
Grade	LM	LM
Pre-opening Waste	%	%
No.1 Superior	.95	.99
No. 2 Superior	.95	1.04
Beater Section	.44	——
Super-Jet	.81	——
Total	3.15	2.03
Opening Waste	——	.30
Picker Waste	1.12	1.13
Card Waste	6.00	6.31
Total	10.27	9.77
Web Appearance	Per 100 sq. in.	
Neps	194	189
Trash	84	93
Cleaning Efficiency	84.59%	75.31%

The cleaning line was processing 1200 lb per hour, and we had excessive chokes in the Super-Jet. We are moving the Super-Jet to a line with lower production. Except for the chokes, we were well pleased with the performance of this equipment.

[Ed Note: See April 1952 issue of TEXTILE INDUSTRIES for report on SRRL (gin-saw type) opener.]

Mill P. We have recently acquired Superior pre-openers, a Superior cleaner, and a Super-Jet machine combined with an Aldrich beater. Our entire opening line for American cotton is as follows:

Three Saco-Lowell feeders
Three Superior pre-openers
Hopper
Aldrich beater
Super-Jet cleaner
Superior cleaner
Opener and condenser (Saco-Lowell)
Centrif-Air and two cleaning trunks to picker room

Recovered waste from foregoing line of opening amounts to about 1½% in processing ⅞ - 1¼-inch Middling cotton. Nep counts at the cards are within the lower count obtained before the change in opening machinery, but the results are attributed to slowing doffer speed to 5 rpm.

Comparison of Waste Percentages Before and After Installation of Pre-Openers
Mill A

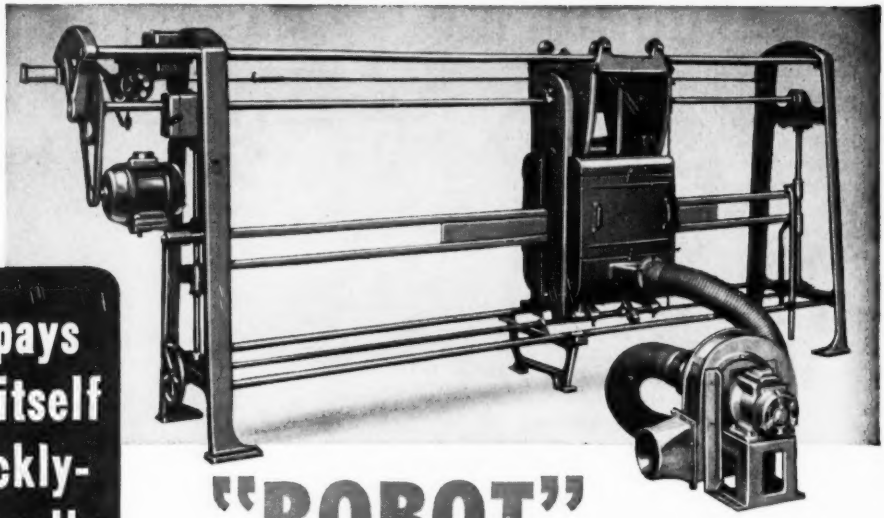
Waste	Before Pre-Openers Installed	After Pre-Openers Installed
Opening:		
F7 Feeder — Fly	.27%	.30%
Fly No. 34 Filter		.01
Motes and Fly Pre-opener		.80
Fly No. 6 Filter	.15	.11
Dust No. 7 Bag Section	.04	.05
Chokes No. 11 Condenser		.01
Motes and Fly No. 12 Openers	.55	.44
Motes and Fly Superior Cleaner	.37	.33
Motes and Fly Centrif Air Machine	.20	.13
Sweeper	.10	.09
OPENER UNITS	1.68%	2.07%
Picker Section:		
Chokes No. 11 Condenser	.04	.01
Fly From No. 6 Filters	.07	.05
Fly and Dust No. 7 Bag Section	.04	.11
Fly from No. 5 Filters	.11	.04
Motes and Fly—Blending Reserves	.12	.11
Motes and Fly—Breaker Beater	.46	.46
Motes and Fly—Finisher Beater	.18	.19
Fly from Sand Box	.02	.03
Chokes from Picker Screens	.02	.02
Sweeps	.05	.04
PICKER UNITS	1.11%	1.06%
TOTAL OPENING AND PICKING	2.79%	3.13%
Cards:	2.88	2.60
Flat Strips	.05	.06
Cylinder and Doffer Strips	.49	.47
Motes	.16	.43
Fly	.08	.06
Clearer Waste	.13	.25
Blow-Off and Sweeps		
TOTAL CARDING WASTE	3.79%	3.87%
TOTAL WASTE, O & P THROUGH CARDING	6.58	7.00
Grade Cotton Used—Both Lines		
Mixing of — 12 Bales Strict Low Bright — 1-1/16"		
12 Bales Middling — 1"		
Nep Count per 20 Grains Card Web	537	357
% Reduction in Neps After Installation		33.5%
Comparative Yarn Strengths		
Tensile Strength — 9 Days Testing 10 Skeins per day	1,823	1,805
Comparative yarn grade		Improvement from ¼ to ½ No. in yarn appearance grade against ASTM (American Society for Testing Materials)

Cotton Maturity, Fineness, and Strength. With few exceptions, a majority of the mills reporting indicated that they use the Sheffield Micronaire and the Pressley machine in testing cotton for fineness and strength. The table at the top of page 149 shows optimum fineness and break factor for various cottons as reported by the mills.

In testing for maturity, one mill uses a test specimen of at least 100 fibers placed on a slide. The specimen is held in place by a glass cover. A pipette is used to flood the fibers with an 18% solution of sodium hydroxide. The specimen is then examined under a microscope at 400 magnification and then classified according to the thickness of the fiber wall. Usually ten slides are made. Fibers having a wall thickness equal to or less than one-half the diameter of the lumen are classified as immature. Fibers having a wall thickness greater than one-half the diameter of the lumen are classified as mature.

Several Georgia mills use the sodium hydroxide method for determining fiber maturity. In one instance the Goldthwait Differential Dye Color Test for maturity was employed.

Effect of Picker Modifications. A picker equipped with conventional type grid bars showed 1.15% waste as compared to 1.64% waste on a picker equipped with universal grid bars. In an-



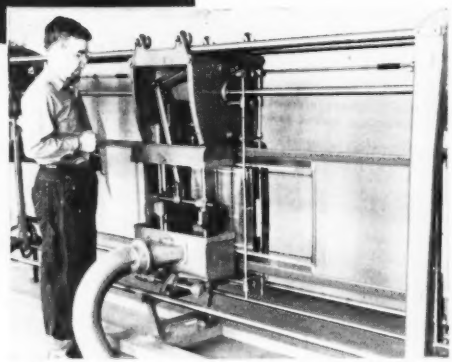
"ROBOT"

AUTOMATIC REED AND HEDDLE BRUSHING MACHINE

It pays for itself quickly-generally in less than 1 year

At top: Over-all view of "ROBOT" with dust exhauster set up for cleaning and polishing reeds.

BY Sam. Vollenweider LTD.
HORGEN, SWITZERLAND



Close-up of central mechanism cleaning heddles

It is an accepted fact that both reeds and heddles are more economical to use — do a better job — when they are subjected to a cleaning and polishing process at regular intervals.

You can do both these operations on this efficient, dual-purpose "Robot" Automatic Reed and Heddle Brushing Machine. Here's what it does for you:

- **Cleans, hones and polishes REEDS**
- **Cleans and polishes HEDDLES in or out of the harness frame**
- **Quickly removes rust, size and dirt**

Here's the finest reed and heddle brushing machine on the market today — an investment which pays for itself quickly — generally in less than one year.

H. J. Theiler CORPORATION
WHITINSVILLE • MASS.

EXCLUSIVE DISTRIBUTORS

Hasler Berne
CENTRAL RECORDING INSTALLATIONS
DIFFERENTIAL INDICATORS

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PAPER DESIGN DOBBIES AND
CARD PUNCHING MACHINES
SHUTTLE TRUING MACHINES

Fröhlich
HEDDLES • DROP WIRES
HARNESS FRAMES

other instance waste removed increased from .56% to .85%.

A picker equipped with fringe roll improved quality slightly; however waste was excessive. Further tests are being made in an effort to control waste in this mill.

Another fringe roll installation allowed the cotton to be opened more, produced a lower coefficient of variation in the laps, and made a more uniform and even lap from side to side. Coefficient of variation was 1.20 before installation of the fringe roll and 1.16 after the fringe roll was installed.

Those using pickers equipped with perforated beater bonnets claimed that the bonnets were helpful in producing a more even lap and that performance was satisfactory (see TI, August 1951, page 98).

Lap Uniformity. Twenty out of twenty-five mills reported regular checks on picker laps by using a lap meter. The interval of checking ranged from daily to once every two weeks. Picker lap lengths ranged from 40 to 55 yards, and the tolerances allowed varied from 2/5 oz per yard to 7/10 oz per yard in some instances; others allowed from ¼ lb to ¾ lb overall for the lap.

Data on Cotton Tested for Fineness and Strength

Mill	Micronaire Optimum Fineness (Micronaire)	Staple (in.)	Grades	Neps per 100 sq. in.	Yarn Count	Break Factor
AA	—	—	—	—	5.50 - 14.00	1950 - 2050
C	3.8 - 4.4 3.7 - 4.0 4.0 up	1 1⅛ 1	SLM M LM MG	55 35 105	27 35 7	— — —
D	3.5	short	—	—	2 - 8	1500
E	3 up	—	—	—	—	—
F	4.5 - 5.25	—	M SLB	26	120 - 30	1569 - 21875
	3.3	—	SLB LM	30	—	—
FF	4.0	1 13/32	—	7 - 15	110	—
G	4.2	1	M SLB	—	—	2160
HH	4.5 —	1 15/16	M M	22 49	7.5 - 26 5 - 28	2246 - 1920 1948 - 1813
M	—	1 1/32	M	20	30	2100
O	3.8 3.8	— —	M SLM	10.8 15.8	3.5 - 24 —	— —
P	4.5	—	—	—	—	—
R	4.5	—	SLM	63	31 40 41	1875 1650 1600
U	4 - 5	1 1/32	SM	4.5 - 5.5 (per grain)	15 - 28	2150 - 2550
Y	4	—	SLM	35 (per grain)	16 - 30	1724 - 2002
W	4	1	SLM	—	4.5 - 20	2000

Lucker-In Speeds. Ten mills are experimenting with or have experimented with high licker-in speeds on cards. The consensus on this subject was that production was increased by using higher licker-in speed, more waste was removed, more fly was evident, no significant difference was apparent in sliver variation, and nep count was improved slightly. Several mills tried high licker-in speed but discontinued the change; others are still experimenting.

Objectionable features noted were: loss of good fibers, vibration, damaged clothing, higher hp requirements, and loss of time in stripping where continuous strippers were not in use. (A detailed report on high licker-in speed employed in one mill appeared in the May 1952 issue of TEXTILE INDUSTRIES.)

Nylon Trumpets. Seven mills tried nylon trumpets on cards and found that sliver variation was not affected. No changes were necessary to run the sliver on drawing frames. From two to six additional pounds of sliver could be put into the cans when nylon trumpets were used. Twenty-five to 50 per cent more sliver per can was possible, according to two answers to the question.

One-Shot Lubrication. Experience with one-shot lubrication on openers, pickers, cards, and roving frames revealed that such systems save time and labor and less oiling is necessary. A precaution was suggested in that it is important to have the system properly installed to prevent leaks and possible damage to the lines. When properly installed, maintenance on the systems was considered negligible, and a marked reduction in supply and labor costs was noted.

Picker Settings for Rayon. In changing from ⅞ - 1" cotton to 1 9/16" staple rayon, the following changes were indicated as necessary or desirable on pickers: reduce speed of lifter aprons ap-

Effect of Fringe Roll on Picker
Mill C

Rowstock Dyed Cotton	Regular	Fringe Roll
Waste Extracted		
Picker Finisher Section	.36%	.81%
Cards	5.63%	5.42%
Lap Evenness:		
Standard Deviation	.39	.67
Coefficient of Variation	2.70	4.72
Web Appearance: (Per 100 Sq. In.)		
Neps	170	150
Trash	65	66
Naps	7	7

MEON MAGIC

When you apply MEON to cotton at the wet twisting operation, using from 1% to 3% solution in water, you'll agree MEON really works magic.

Here's Why:

• INCREASED BREAK STRENGTH

Since a considerable increase in BREAK STRENGTH can be obtained with MEON TREATMENT, many mills have found it possible to start with a shorter staple cotton and still produce a product meeting the minimum BREAK requirement *which formerly required a more costly raw material.*

• SETS THE STRETCH

MEON treatment is also an aid in maintaining the degree of elongation imparted to the yarn in processing, and produces *greater uniformity.*

Learn how MEON will benefit you and write for full particulars today.

BORNE SCRYMSER Since 1874

Our Laboratory Facilities are always at your disposal

Other MEON Uses

- As an emulsion or size inhibitor and stabilizer when dissolved first in ½% to 1½% solutions with water before emulsifiable oils or size compounds are added.
- As a fibre lubricant and softener when 1½% solutions are applied in the amount of 1½% – 2% total volume, by weight, on cotton, rayon, wool, or other wastes before reworking.
- As a surface active agent when using 0.1% to 0.5% solutions in innumerable applications where rapid wetting and increased penetration is desired.
- MEON in solution is used in connection with the garnetting of hard thread waste (both cotton and synthetic). Application is generally after garnetting, and gives more drag to the short fibres produced and thus permits more efficient carding and spinning.

BORNE, SCRYMSER COMPANY ELIZABETH, N. J. • CHARLOTTE, N. C.

MILL MEN throughout Georgia and several mill representatives from surrounding states attended the open forum meeting on carding and spinning, despite inclement weather.

proximately 50%, reduce beater speed to 850-950 rpm, use blade beater at back, and reduce fan speed to approximately 1100 - 1200 rpm. Also, it is helpful to close grid bars or substitute a metal plate for them. Several mills open the beater settings as much as $\frac{1}{8}$".

Three-Over-Four Drawing. In describing results achieved by using three-over-four rolls in drawing, sliver variation was improved a minimum of 3% and a maximum of 11% over drawing systems formerly used in the mills answering the question.

Those who tried 6, 8, and 10 ends up in drawing concluded that variation on single-process drawing with 10 ends up is better than either the single-process with 6 ends up or two-process with 8 ends up. Yarns made from two-process drawing have a slightly higher breaking strength but more variation.

EXECUTIVE COMMITTEE (left to right): **R. J. McCamy,** Pepperell Mfg. Co., Lindale, Ga., general chairman; **J. A. Byars,** Riegel Textile Co., Trion, Ga.; **George McMillan,** Crystal Springs Bleachery, Chickamauga, Ga.; **R. W. Lawson,** Chicopee Mfg. Co., Gainesville, Ga.; **T. R. Scott,** Martha Mills, Silvertown, Ga.; **T. M. Hampton,** Callaway Mills Co., LaGrange, Ga.

Curtains, tarpaulins, flame shields, airplane cloth, laboratory aprons and many other applications can be woven of Fiber·Glass. Continuous-fiber textile yarns of 150 series have a tensile strength of 250,000 pounds per square inch, and withstand temperatures up to 800°F.

New markets, extra profits with Fiber·Glass textiles

Growing demand for strong Fiber·Glass fabrics creates new, profitable textile markets

ADD FABRICS woven of L·O·F Fiber·Glass to your present line and open up new markets. Your sales opportunities are almost unlimited; more and more applications are demanding textiles with the outstanding properties of fibrous glass.

Textiles made from L·O·F Fiber·Glass yarns combine a number of selling advantages. They will not shrink, sag, mildew or rot. In addition, they are fire-resistant and are unaffected by most acids, corrosive vapors and oils.

Whether or not you are already using fibrous glass for textiles, you can look to Libbey·Owens·Ford as an important source for top-quality Fiber·Glass. L·O·F is ready to offer you the services of its varied technical facilities.

If you'd like technical data, or want to talk about uses of Fiber·Glass in industrial and other fabrics, call the nearest L·O·F office (district offices in 24 major cities). Or get in touch with Libbey·Owens·Ford, Dept. F·G 1862, Nicholas Bldg., Toledo 3, Ohio.

L O F FIBER·GLASS

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FIBER·GLASS

Single Apron Roving Frames. Only three mills had new type single apron roving frames in operation. One had secured satisfactory results on three 8 x 4 frames drafting 32.76 on 5.70 hk roving, doubled at spinning and making 110s yarn. Another mill reported unfavorable results in that it lost four doublings in the new arrangement. There was insufficient experience to permit conclusions on this equipment.

Four answers to the questions indicated that changing 9 x 4½ roving frames to 10 x 5 is simple, and no difficulties were encountered in subsequent operations. Changing from 8 x 4 to 9 x 4½ was not a desirable change, according to one experience.

Opinions were evenly divided regarding differences between roving on the front line of spindles and roving on the back line of spindles. Six mills indicated that front line roving had less twist, was lighter, and had more variation than back line roving. Tests in other mills indicated no significant difference.

Air Cleaning in Spinning. Overall experience with the latest type Pneumafil installations was favorable. One mill equipped with Pneumafil on all spinning commented as follows:

"The cleanliness of the yarn is improved by eliminating most of the fly and doubling which occurs when an end breaks. Quality of yarn is improved because Pneumafil eliminates some of the lapping up. The approximate return on the investment is 75%. There is slightly more waste with Pneumafil than with the regular type clearer, but this is due to the increased job loads which the spinners were given."

Other mills figured about 10% return on the investment.

Frequency for Scouring Rolls and Overhauling Spinning Frames

Mill	Overhauling Interval	Scour Rolls Interval	Yarn Counts
AA	2 yrs.	4 mos.	—
BB	1 yr.	6 mos.	12 - 26
C	—	6 mos.	17 - 40
D	1 yr.	3 mos.	—
D	1 yr.	4 mos.	—
D	1 yr.	6 mos.	—
DD	—	8 mos.	20 - 26
E	1 yr.	4 mos.	—
F	when necessary	6 mos.	12½
FF	1 yr.	1 yr.	100 - 110
G	—	—	19½ - 30
GG	1 yr.	9 wks.	—
H	1 yr.	6 mos.	10 - 24
I	10 mos.	5 mos.	14 - 25
L	1 yr.	2200 hrs.	—
M	10 mos.	10 mos.	7 - 36
N	1 yr.	1 yr.	8 - 24
O	48 wks.	24 wks.	3½ - 24
R	7 mos.	7 mos.	—
S	3 yrs.	8 mos.	—
T	1 yr.	1 yr.	—
U	1 yr.	4 mos.	3.4 - 9.5
V	1 yr.	3 mos.	16 - 30
V	—	3 mos.	—
V	1 yr.	6 mos.	6 - 26
V	—	4 mos.	3 - 20
W	6800 hrs.	3400 hrs.	—

Overhead Cleaning. Twelve mills equipped with overhead traveling cleaners disclosed that they also blow down overhead at intervals ranging from once in 24 hours to once a month. The overhead traveling cleaners permitted an extension of the time interval for manual cleaning with compressed air.

Overhead cleaning with compressed air was performed on schedules varying from once in eight hours to once a month in mills not equipped with traveling cleaners.

The time cycle for traveling cleaners in some instances was as low as 2½ minutes; in others as

Data On Double Apron High Draft Spinning

Mill	Cotton	Hank Roving	Yarn Count	Front Roll Speed (rpm)	Knurled Roll Cleaning Interval	Ends Down per M Spdle Hrs	Weight on Top Rolls	Loom Warp Stops
A	M 1"	1.00 - 1.25	31	107	2 - 6 mos.	122.59	—	1.400
	—	—	—	—	—	72.58	—	.836
F	M 1"	.50	12	160	3 days	34	27 frt 13½ back	—
FF	Egypt 1 13/32"	5.70	110	88	—	40	Spring	—
G	M 1"	1.00 - 1.50	21 - 30	114 - 133	3 mos.	55	—	—
HH	M 1"	.85	22	121	3 mos.	30	45	—
I	M 1"	1.00	23	125	—	—	—	—
P	Karnak	3.00	58	115	—	Normal	—	—
T	M 1 1/16"	1.00	31	130	6 mos.	35	42	—

BENTLEY—Oil in 1951 cotton. . .

SCOTT—Remove chokes. . . . . .

McMILLAN—Less oiling. . . . . .

ELECTED TO EXECUTIVE COMMITTEE

R. W. Lawson, plant manager, Chicopee Mfg. Co., Gainesville, Ga., succeeds himself for a 2½ year term.

J. A. Fife, superintendent, Scottdale Mills, Scottdale, Ga., was elected for a 2½ year term to succeed **James A. Byars,** term expired.

much as 26 minutes. Seven out of twelve mills claimed less slubs, which was attributed to traveling cleaners; two claimed more slubs; and the others were doubtful.

Aprons on Roth Long Draft. Nothing conclusive was offered on either synthetic or leather apron performance on Roth system long draft spinning. Some mills reported difficulties with leather aprons; some had trouble with synthetic aprons; others had no trouble with either synthetic or leather aprons. The most common complaints were: stretched aprons, collections of lint, cleaning problems, and aprons becoming slick.

One man explained that he had discontinued using covering on slip rolls, had chrome plated them, and was getting satisfactory results.

Roll Picking. Nineteen of twenty-five mills use roll pickers to clean rolls in spinning, instead of having the spinner pick rolls by hand, and these mills operated on the basis that better quality was secured when roll pickers were used. Five mills had spinners perform the picking operation, and these were satisfied with the results.

Determining Quill Requirements. A formula was suggested for use in determining the stock of quills to maintain for weaving operations.

An example of the formula is as follows:

Mill F: Example for quills 40" x 2 loom on 40" 48x44 3.25 sheeting.

(a) Spindles in place x 2 (for doffing) 5040 x 2 or 10,080 quills.

(b) No. quills in battery x No. looms on construction 240 x 20=4800.

(c) Quills through looms in 4 hr x No. looms (1 quill 17's runs 5 minutes 25 seconds) 240 x 44.3=9732.

(d) Number of quills used per hour x number of hours ahead (a numerical repeat of "c")=9732.

(e) 2 x spindles in place for stripping and transporting. 5040 x 2=10,080.

(f) Clean quills in storage (same as "c") 9732. Total 54,156.

(g) Add 13% x 250 working days per year of 54,156. Total.....17,600

Plus (f) 54,156

Grand Total 71,756

The foregoing figures tally closely with Draper's recommendation —300 quills per loom.

Twister Creel Spindles. In answer to a question regarding experience with new type twister creel spindles which allow the cheeses to rotate in the same direction, only one mill answered:

Mill E. We use twister creel spindles which permit all cheeses to rotate in same direction. If cheeses are not separated, sometimes they cause kinky yarn on both filling and warp twisters when one cheese is larger than the other.

Creeling Roving. Twenty-one of twenty-seven mills have roving ends twisted together, and six lap the ends together when creeling. No one was using a method of creeling which would prevent slubs or soft places where the stock is pieced together.

Snick Plate Settings on B-C Spooler. Seven answers to one question indicated that standard snick plate settings were satisfactory on B-C spoolers. Three mills used settings wider than standard, and three mills preferred other settings but did not state what settings.

Warpers. In two instances mills reported changing to 32" beams on warpers. No trouble was encountered in the changeover; however the heavy package was found to cause additional wear on clutch and brakes, thereby necessitating replacement of these parts much more often than previously. The comb had to be raised about four inches in changing from 28" to 32" beams on B-C equipment in one instance.

Overhauling Winders. Out of nine answers regarding overhauling schedules for winders, four overhauled on a yearly basis, and five as needed. Five mills use overhaulers to do the job, two have fixers to do the job, and two have section men do the job.

PROGRESS REPORT #2

Dateline . . .

CIBA, TOMS RIVER, N. J.

This is the second in a series of pages published by Ciba to acquaint industry and the public at large with its expanding facilities for production and service.

More than meets the eye...

"CIBA TOMS RIVER" will be the most modern plant of its kind. Upon completion, it will become a headquarters for Ciba's greatly expanding production of vat colors. Through these facilities, Ciba will help to meet the needs of dyers . . . and their customers in the textile and converting trades . . . for more dyes of a class that is distinguished for its exceptional fastness to light and washing.

In the photograph above, you see the present advanced stage of construction at this new Ciba plant in central New Jersey.

What cannot be seen among the brick, stone and steel is the key force that has been at work here from the beginning . . . the vision and energy that sparks the progress of all *American enterprise. In this progress Ciba is proud to have its products and services in the fields of pharmaceuticals, plastics and auxiliaries, as well as dyestuffs, take a significant and growing part.*

Measured in terms of more and better products for the markets Ciba serves . . . measured, too, in terms of more jobs, increasing purchasing power within the area, fine working conditions and constructive community relations . . . Ciba management believes that "Ciba Toms River" will be an asset to the national economy from which durable contributions may be expected to the nation's continued growth, prosperity and strength in peace and war.

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Does the industry profit by

3-Shift Operation?

Georgia executives meet in Boca Raton

Staff Report

GEORGIA textile executives, meeting in Boca Raton, Fla., heard Henry W. Swift intimate that the industry can ill afford 3-shift operations in times of normal demand. Mr. Swift, outgoing president of the Cotton Manufacturers Association of Georgia, spoke to the association at the 52nd annual meeting, held April 16-18.

He pointed out that the industry, in its jealous defense of individualism and in its independence, had developed operating policies and practices which, except in periods of abnormal consumption of products, unbalances supply and demand—"and we are paying the penalty for our violation of that basic economic law."

Mr. Swift presented options to the industry of taking the attitude of "survival of the fittest" or, i.e said that it can calmly and realistically review the operating policies and practices and determine whether in the interest of permanent stability and continuous prosperity it can afford to maintain the multiple-shift overtime operations to which it has become accustomed during the period of abnormal demand for goods . . . "we may well consider whether the reduced operating costs resulting from the third shift are not more than offset by the depressing effect upon our price structure which is caused by the excess production of the third shift."

Officers Elected. J. Mac Cheatham of Dundee Mills, Inc., Griffin, Ga., was elevated to president of the association, succeeding Mr. Swift. Other officers elected were R. H. Jewell, of Crystal Springs Bleachery, Chicamauga, formerly treasurer, as vice-president of the association; and George E. Glenn of Exposition Cotton Mills, Atlanta, as treasurer. T. M. Forbes and Frank L. Carter of Atlanta were reelected executive vice-president and secretary respectively.

In the field of public relations, it was reported that a committee has been assigned the project of making a case study of a representative Georgia textile mill community, which study will be publicized to inform the people of the state of the importance of a textile plant in a specific locality.

The safety contest among the Georgia mills has grown from 82 plant participants to 105 for the current year.

Nearly six hundred mill men and suppliers, along with their wives, attended this convention, making it the largest state convention of any textile group.

NEW PRESIDENT of the Cotton Manufacturers Association of Georgia is J. Mac Cheatham of Dundee Mills, Inc., Griffin, Ga.

Port of Savannah

Governor Herman E. Talmadge of Georgia, who was a featured speaker at the convention, reported that at present 90% of the textiles exported from the state pass through the port of New York. The port of Savannah could handle the same export goods at less cost to the mills, he said.

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Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Scouring Woolens Oiled With Poor Oleines

Ed. Note: An article titled "Scouring Woolens Oiled With Good Oleines" appeared on page 151 of the May, 1952 issue of TEXTILE INDUSTRIES.

EDITOR TEXTILE INDUSTRIES:

The scouring of woolens oiled with good oleines differs from the procedure used with poor oleines. A good oleine is usually considered to have a free fatty acid content of not less than 70%; a medium oleine may contain about 50 %; and a poor oleine may contain only 30-40% free fatty acid. The procedure with medium oleines is almost the same as with good oleines.

Where light and dark shades occur in the same piece, the procedure may be the same except that in the second stage it may be necessary to add additional soap solution if there is evidence that the scouring is not efficient. In dyeing solid colors and on white pieces scheduled for dyeing, a single stage scour may be used employing 25-30 gallons of 6 degree Tw. soda ash per 100 lb of cloth.

Woolens oiled with poor quality oleines usually are made to fall in a certain price category. The use of a poor quality oleine is in itself an indication that cost has to be considered, and low quality woolen goods fall within this category. Woolens made from re-processed fibers are designed for the low-price trade, and the finishing routine must fall into line from a cost standpoint.

A practical method of scouring is to reduce the amount of liquor in the beck, give a one-bath scour, and use stronger soda ash. 8, 10, 12, and sometimes 16 degrees Tw. soda ash solutions are used. Some scourers of this type of goods regard it as an admission of failure if soap has to be added, but additional soap may be useful on some occasions.

A typical scour for woolens oiled with oleines containing about 40% free fatty acid may be conducted as follows: Use a bath consisting of 18 gallons of 12 degrees Tw. soda ash solution to every 100 lb of cloth to be scoured. Scour the piece at a temperature around 85 F for half an hour. The time may be reduced or extended in some instances, depending upon conditions prevailing.

Experience and judgment remain part of the scourer's stock-in-trade, and certain pieces require more time than others. During the period of scouring the temperature tends to fall. It is therefore desirable to warm up the liquor in the beck with water at 110 F and to follow this immediately by washing-off with water at 110 F for 20 to 40 minutes—then allow to cool. A neutralizing process may be given if necessary.

Blankets are given a similar scour using 8 degrees Tw. soda ash. Great care is required with a single stage scour of this type. There is no excess of soap, and the scouring emulsion is considerably contaminated. Perhaps the

KINK CONTEST!

15 minutes of your time may be worth $100

This contest ends July 15, 1952.

EVERY kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are received.

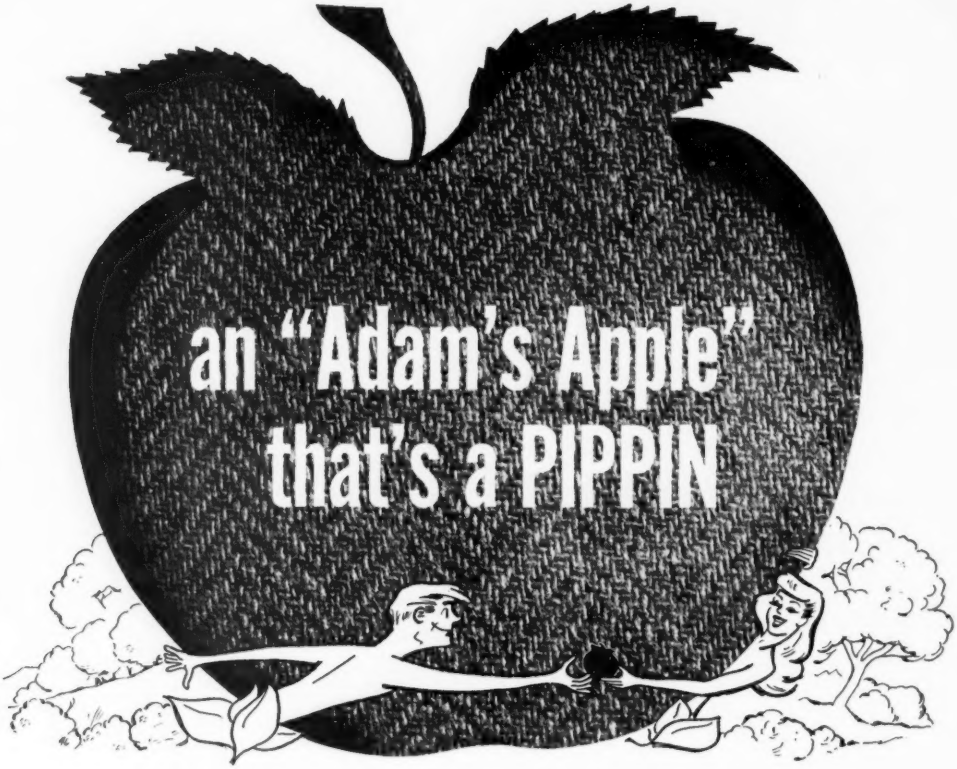
The contest rules are simple:

All contributions must be postmarked not later than midnight, July 15, 1952.

A photo or rough sketch will make your entry more valuable, but if you don't have either, send us you kink anyway.

Send your contest entry to:

Editor TEXTILE INDUSTRIES, 806 Peachtree Street, N. E, Atlanta 5, Georgia.



You've probably heard them say in the industry: "Wetting agents are like Adam's apples, everybody's got one." And by "everybody," of course, they mean the makers of textile chemicals.

We're no exception; we have an "Adam's apple"—and it's a *pippin*. We offer it in the firm belief that it will not only benefit *you* but all the Adams and Eves who utilize your fabrics.

Our product is Nopco® 1086-A—an excellent wetting and rewetting agent, applicable in mild alkaline, mild acid, and neutral solutions.

We are confident 1086-A, one of the quality chemicals of our outstanding NOPCOWET* Series, will do a remarkably good job for you in numerous operations, and suggest you'll find it especially advantageous when employed as—

(1) a wetting agent in starch and softener mixes;

(2) a penetrant in the application of enzyme desizing agents;

(3) an agent for imparting a high degree of absorbency to greige goods prior to dyeing (in fact, an all-purpose dyeing assistant);

(4) a wetting agent in the processing of wool for chlorine shrinkproof treatment.

Nopco 1086-A sells competitively. In fact, it saves money for its users, since in virtually every application it proves more economical than comparable agents of this type.

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most critical stage is at the first part of the washing-off. Emulsified dirt is at this stage being transferred, and great care has to be taken not to crack the emulsion.

There has been increasing use of mineral oils in recent years, due to the shortage of fatty oils. In their unmodified state, mineral oils are difficult to remove. Blends of 20% oleine and 80% mineral oil may be scoured out with soap alone (no added alkali). Although laboratory trials have been satisfactory, in practice it has been found much more suitable to use an emulsifier with the mineral oil.

Various emulsifying agents have been used. These polar compounds are usually alkali sensitive and the scouring method must be modified accordingly. The normal strength soda ash solution is unsatisfactory, and in one instance where this was done, the piece had to be dry cleaned and scoured. Such incidents place emphasis on the need for close liaison among all departments in the mill.

Mineral oil should be removed in the form of an emulsion in the first bath. A low alkali strength and a large bath factor are needed. A typical scour may consist of 60 gallons of 1 degree Tw. soda ash to every 100 lb of cloth at a temperature of 80 F. Run the pieces for about 12 minutes and then remove the liquor. The second bath may include soda ash, synthetic detergent, or soap. The former is probably best, particularly for use on piece dyed goods. About 15 gallons of 4 degrees Tw. soda ash plus 1½ lb of a suitable detergent may be used on each 100 lb of cloth.

After running for a quarter of an hour, the bath should be warmed up with water at 110 F, and the quantity of liquor in the beck should be doubled. A run of three to five minutes is necessary to warm the pieces thoroughly before washing. Washing usually requires about 20 minutes. The pieces should then be cooled to prevent any color bleeding during short-term storage. The cooling process takes only five minutes

(*Continued on page* 163)

Brush Drive Removed From Cards

EDITOR TEXTILE INDUSTRIES:

A sizeable saving can be effected in the card room by removing the cam and ratchet mechanism used to drive the two small bristle brushes which clean the flats at the sprocket and guide pulleys. The cost of the drive assembly may seem minor, but on an annual basis, it turns out to be another of those items that adds materially to the cost of operation.

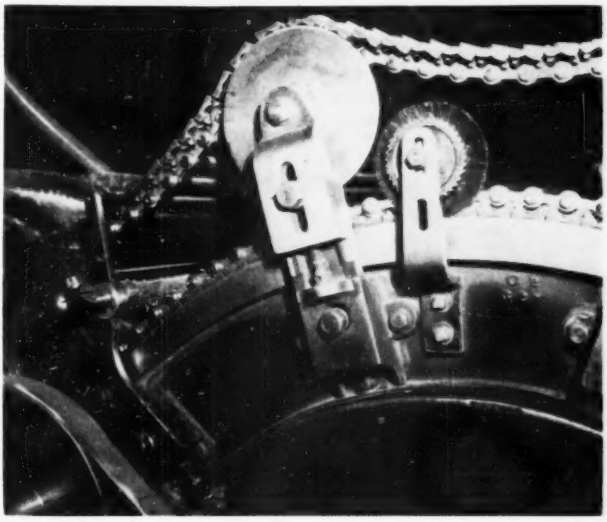
For example, the cost of the assembly, including the stud, amounts to about $1.40 per side, and for 100 cards, the cost is $280. We have found that the life of the ratchets is about three years, which means an annual expense of $91.00 for materials alone in our card room. If the cost of labor for replacement is added, the total cost is above $100 per year, or about $1.00 per card, per year.

The same cleaning job can be done without the ratchets by setting the brushes so that they contact the flats enough to permit the flats to turn the brushes. When the brushes are arranged this way, they clean the flats as well as the ratchet-driven brushes.

It is important to keep the brushes clean and to reset them when enough wear has occurred to make an adjustment worthwhile. A similar adjustment would be necessary on the ratchet-driven brushes.

CONTRIBUTOR No. 8468

FLATS TURN BRUSH which is adjusted to contact flats after ratchet and cam drive is removed.



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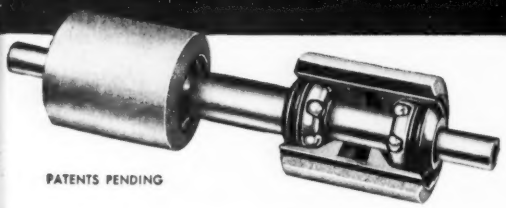

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Climax Rolls are custom-made to suit your equipment and your weighting requirements.

and is well worth time and effort. If necessary, the pieces may be acidified.

Observance of the foregoing precautions should assure good results in scouring. Intelligent observation followed by appropriate action is necessary at all times. Basically, the recommended procedure should produce excellent results and prepare the pieces most effectively for the milling process which follows.

CONTRIBUTOR No. 8452
[*Foreign*]

Systematic Waste Control Provides Accurate Accounting

EDITOR TEXTILE INDUSTRIES:

A helpful control procedure was evolved as part of a major waste reduction program in a large group of mills.

It had become evident that previous methods of waste handling were inadequate. Waste classification (according to process), handling, weighing, recording, and disposal often varied. With such ineffective control there were no accurate data on the amounts of waste lost at each process, comparisons between individual waste percentages during successive accounting periods were likely to be invalid, and there was no basic information on which to plan a campaign of waste reduction.

The main difficulty was in the mill itself. The problem was to make certain that no errors could occur in classifying, weighing, recording, and disposal without being observed. If this problem could be solved, we would then be certain of our basic information on waste and could plan accordingly. In brief, the actual process wastes could be compared to the computed standards, and prompt action could be taken to reduce those which were excessive.

From the point of view of management, a solution to the problem would achieve the following objectives:

(1) Accurate and systematic accounting of monetary losses due to waste.

(2) Greatly improved control.

(3) Individual mills' waste performance placed on a comparable basis (after allowing for different processing set-ups).

Here are the details of the system which finally provided the required control:

(a) It was decided that every type of waste (other than such foreign matter as broom bristles, banana skins, and similar trash) should pass through a central waste house, consisting of a suitable room equipped with a weight scale and a board for record sheets.

(b) Each department in the mill was supplied with a large number of double tags (the two individuals in a pair being lightly attached at their corners). The printing consisted of an identical number on each half of a double tag; one number being in red and the other in blue; and a waste classification corresponding exactly to the different process wastes listed on the waste house record sheets.

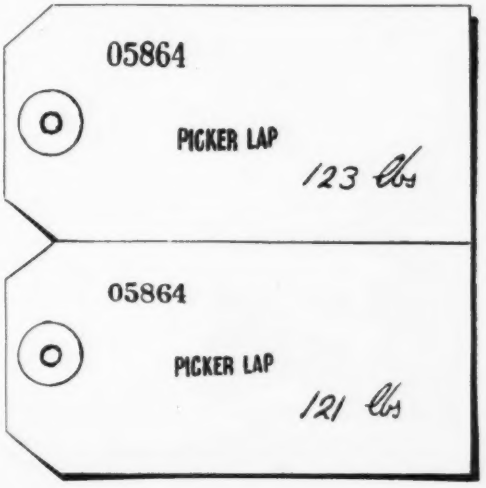
Hereafter the forementioned tags will be referred to as "red" or "blue." The quantity printed with the different waste names was estimated according to probable consumption.

(c) All responsible operators in each department then received a supply of these tags (enough for a two weeks' run).

(d) Apart from the scale in the waste house, every department had the use of another weight scale.

The normal procedure is now as follows:

(e) Every container of waste in each department is weighed in that department, and the net weight of the contents is written on the blue



"PICKER LAP" on the tags indicates the waste classification. Red numbers on one tag correspond to blue numbers on other tag and indicate the batch of waste referred to. The written figures show the net weight of waste weighted in the waste house and department, respectively. The discrepancy among scales is of little consequence. The prefix number (0) identifies the department from which the waste came.

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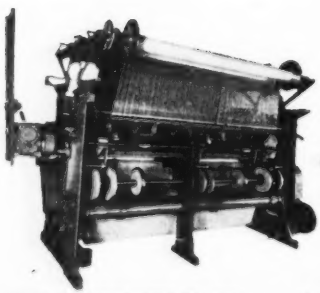
You'll find the *Kidde* Knitter adaptable to practically any type of yarn, thread or elastic—quickly and easily set up for simple or intricate patterns.



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tag only of the appropriate waste classification.

The operator weighing the waste tears the blue tag off and later turns it into the department office.

He puts the unmarked red tag into the waste container, which is sent to the waste house.

(f) The operator in the waste house then weighs the container, marks the net weight of the contents on both the red tag and his record sheets and places the red tag on a hook under the name of the department from which it came. He then disposes of the waste.

(g) At the end of any required period, the waste house man strings all red tags of each department together through the eye in each tag and brings them up to the control laboratory with his record sheets.

(h) Each department follows the procedure with the blue tags.

(i) The control laboratory staff then totals up each waste classification on the record sheets and checks the totals. A lab man then takes the tags from a department for one particular type of waste and checks the weight marked on each tag against the entry on the waste house record sheets, crossing the latter with a blue pencil. Then the lab repeats the procedure, using the red tags from the waste house.

(j) Each double tag is numbered successively, and the first digit of each number is different for each department; therefore no confusion may be caused by identical weights frequently recurring on the record sheets. However, in the event of any record sheet entries unconfirmed by both a red and a blue tag, the appropriate department is informed with a view to investigation.

(k) Each department maintains a steady supply of tags to its operators, the control laboratory scrapping them as each check is completed.

The following observations on the system may not be readily apparent from a first reading of the procedure:

Errors in waste classification cannot occur because each department names all its wastes and the names are clearly printed on both tags; moreover, the waste man is on the lookout for wrong tags.

Handling errors, such as weighing and recording the same waste twice, are avoided. To prevent errors, the waste house has a red tag for every insertion on the record sheets, and for every red tag there is also a blue tag. The numbers on the tags prevent errors of duplication.

Errors in weighing are easy to determine. Any discrepancy between red and blue tag weight marks will indicate either that there is a diference between department and waste house scales, or that the operators are recording incorrect weights. Since the former can easily be checked, the latter may be determined easily.

The control system has been in operation for six months, and our original problem has been adequately solved. The small expense of the tags and the cost of organizing the data have been amply rewarded by the knowledge that all the information is accurate and no faults can occur without being observed.

Furthermore, since everyone is aware of the control system, mill supervision is improved, and any sudden increase in process waste can be quickly traced; moreover,

(*Continued on page* 167)

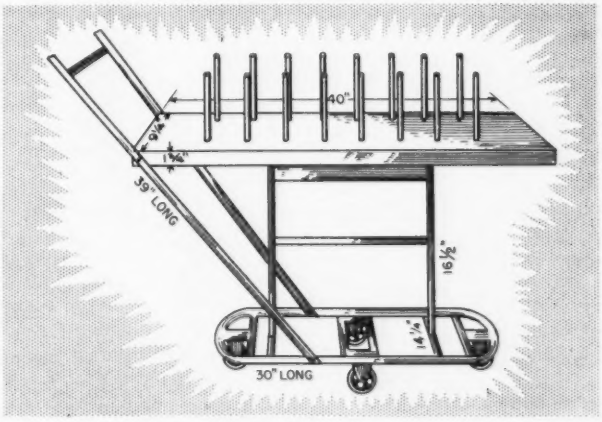
Sample Truck Saves Time

EDITOR TEXTILE INDUSTRIES:

We have built a truck for use in transporting size samples from the card room to the spinning room. Usually the samples are secured, sized, and then carried to the spinning room. In most instances two trips are required to carry samples to the spinning room.

The sample truck, shown in the accompanying illustration, permits picking up the samples and taking them to the spinning room, all in one trip. The truck may be built to accommodate any size bobbin. We run a single roving in the spinning room, and our requirements call for 16 bobbins to be sized; 8 warp, and 8 filling, from a 9 x 4½ frame. The truck was built to serve our purposes, and with slight modifications, it may be adapted to serve a useful purpose in many other mills.

CONTRIBUTOR No. 8453



NEW MACHINE SET-UP SPEEDS SHIRT PRODUCTION

These advanced design features of the "W & G" Type 1101 mean higher efficiency to shirt front operations:

AUTOMATIC LUBRICATION permits sustained operation at highest practical speeds. A large reservoir with built-in level gauge feeds the correct amount of filtered oil to each bearing by capillary action through oil wicks. No manual oiling necessary.

INTERNAL BELT DRIVE of wire-reinforced composition has extra strength and durability for heavy-duty, high-speed service.

ARM SHAFT in perfectly balanced eccentric sleeve bearing assembly minimizes noise and vibration.

SINGLE HAND WHEEL with improved belt guard gives added safety—simplifies threading, starting and stopping.

THREAD GUIDES with built-in separators prevent whipping or snarling of threads.

NEW FRAME with large removable cover plates saves down time for cleaning and inspection.

WILLCOX & GIBBS
Sewing Machine Co.

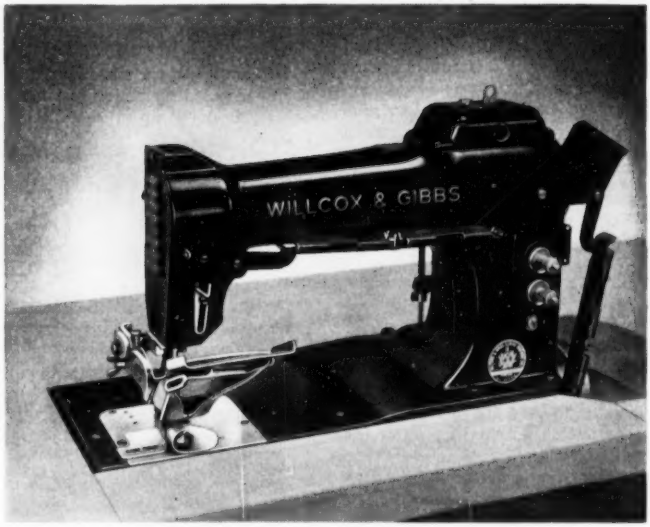
214 West 39th St., New York 18, N.Y.

"W & G" Type 1101-26 Machine Offers Faster, Easier and Better Method for Attaching Front Plaits to Dress Shirts

■ The outstanding speed and economy of the Willcox and Gibbs Type 1101 flat-bed seaming machine have been repeatedly demonstrated on a wide variety of lap-seam felling operations. This same machine is now available with a special organization which adapts it for center plait operations on dress shirts—assuring a smoother, more even finish than has heretofore been obtainable with any other machine for handling this type of work.

The extremely high speed of this automatically-lubricated machine with internal belt drive permits a substantial increase in production rates as compared to other methods of center-front seaming.

If you want to step up both the quality and quantity of your center plait attaching operations, be sure to look into the new "W & G" Type 1101-26 machine. Your nearest Willcox and Gibbs representative will be glad to give you complete information.



Willcox & Gibbs Type 1101-26 flat-bed seaming machine with special foot and folder organization for attaching front plaits to dress shirts.

with steadily-increasing attention being paid to cost control in modern mills, and the consequent close examination of every aspect of manufacturing operations, we are convinced that the advantages offered by this control check are too numerous to be ignored. It is not intended that a constant check should be in progress, but that a system is in operation which permits spot checks or complete investigation, and at the same time provides a systematic handling procedure. CONTRIBUTOR No. 8464

Comments on "Selling Research"

EDITOR TEXTILE INDUSTRIES:

We were very much interested in the article entitled "Selling Research," appearing in the section "An Executive Views the News in Textiles," on page 95 of the February 1952 issue of TEXTILE INDUSTRIES. Although the article was doubtless written with top management in mind, I would like to discuss this subject from the viewpoint of the overseer in the mill.

Our organization is not large enough to maintain a research division. We do, however, support a well-known cooperative research organization, and we frequently get reports from other research groups, including those sponsored by the government.

The reports from these research organizations, after being read by top management, are sometimes passed on to the foremen in the mill to be read by them and the secondhands.

Some of the reports, of course, are couched in language simple enough to be understood by anyone having the equivalent of a high school education, or even less. Others contain formulas and terms not readily understood by the average man in the mill.

We realize that it is often difficult to explain complicated formulas and equations in simple, down-to-earth language, but we believe that the nearer this is accomplished, the easier it will be to sell a research project to the mill.

It has been my observation that the average mill executive, busy with everyday problems pertaining to the operation of a textile plant, answering the telephone, writing letters, conferring with dozens of people each day, and performing other duties, will glance over a lengthy, technical report. Usually the report is passed on to some member of his staff for interpretation. The executive may or may not get a favorable interpretation, depending upon the viewpoint of the staff member.

Wouldn't it be better for all concerned—the executive, who perhaps can understand the highly technical report, but who does not have time to digest it, and the overseer, who perhaps is unable to grasp the full meaning of the advanced mathematical equations and "jaw-breaker" technical terms—to have a summary of the research project in simple, concise mill language?

Last year, while in England, I visited Shirley Institute. It was pointed out to us that on the staff of the Institute were men whose duties were to take the reports made up by the "long-haired" scientists and to rewrite them in terms understood by the men in the mills. As an overseer, I would like to see more of our research organizations follow the procedure of Shirley Institute.

CONTRIBUTOR No. 8467

Loom Stops Traced to Spooler Slough-Off

EDITOR TEXTILE INDUSTRIES:

Recently we carried out a series of tests on our loss stoppages in winding, and found that 9% of the total stops are due to slough-offs. Proceeding a step further, we discovered that ⅓ of the slough-offs contained a knot tied by the knotter on the B-C spooler.

The knot turned our attention to the spooler where we found what we believe is the potential cause of the slough-off. During the period a knot is tied, and prior to the machine depositing the cheese on the drum, the cheese continues to revolve, thereby winding yarn which is "out of traverse" with the rest of the cheese. During warping on the B-C high speed warper, these "out of traverse" rings have a tendency to come off the cheese all at the same time. Naturally, it does not happen frequently, but when it does, the slough-off is beamed, and becomes our end-break at the loom. We would be interested in finding out whether the readers of TEXTILE INDUSTRIES have any experience in overcoming this condition, and what was done.

CONTRIBUTOR No. 8422

◆

EDITOR TEXTILE INDUSTRIES:

The problem of CONTRIBUTOR No. 8422 in regard to slough-offs and breaks due to straight wind on cheese may be remedied as follows: Cut the cheese supporting plate (KKF 159-1) one inch on upper left hand corner. Cut to extend diagonally to lower left hand corner. This will give the tied end a chance to drop off the plate and engage traverse on drum quicker. We have done this on 32s warp and it effectively stopped our trouble from this defect.

Under high humidity conditions and using heavy yarns the foregoing suggestion is practically a "must" in order to run. If the cheese brake is too light, or if wind-up shield is too loose, the trouble will occur.

CONTRIBUTOR No. 8431

What's U. S. Rubber doing with spooler sleeves?

Making them of Uscolite, the rubber plastic. This minimizes creel breaks on the warper, thereby preventing wild yarn and knots from occurring in the twister beams and slasher beams, saving time and work.

This remarkable material is exceptionally long-lived and has excellent resistance to chipping around the edges. Uscolite Spooler sleeves are available in both Type A and Type C sizes for Barber Colman spoolers—in 3 colors—blue, gray, brown.

U. S. Rubber's line of textile mill specialties is the largest and most extensive in the industry. The use of these textile specialties *reduces* cost, *increases* product quality. Write for full information without delay to address below.

PRODUCT OF

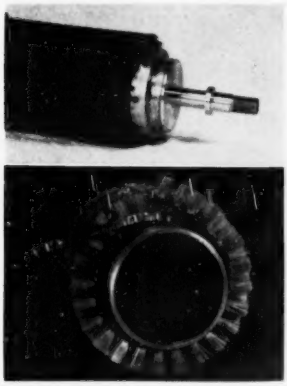
U.S.RUBBER
SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION · ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Tufted-Type Brush

(Continued from page 85)



How the Industrial tufted-type metal core brush is constructed.

woolens and worsteds, and other purposes requiring the additional stiffness that tufts impart.

The closely wound metal bands and solvent resisting cement in which the tufts are set make this new type brush impervious to moisture, the manufacturer states, and at the same time allow water to flow freely between the tufts to get out any matter that penetrates the dense brush surface.

The bristle is renewable when worn down.

Industrial Brush Company, Inc., Little Falls, New Jersey.

For additional data, request item F-118, using business reply card on page 228.

60" Semi-Decating Machine

A 60" Versamatic semi-decating machine has been developed.

The main feature claimed for this unit is the quantity of material that can be processed uniformly at a single loading. Full sets of woolen and worsteds and thousand-yard rolls of synthetics are successfully handled, the manufacturer states.

The machine has been designed to take the cloth from either a roll or fold and to deliver the cloth in either a roll or a fold. Uniformity of finish is said to be assured by automatic apron tension control and controlled pressure roll, combined with automatic cycle control for both steaming and cooling.

Another feature of the machine is the automatic apron guide which keeps the apron dressed evenly to one side at all times and is completely automatic. The infinitely variable speed hydraulic drive assures smooth running operation in both directions with fingertip control, being designed to keep the correct tension on the apron even when running at high speeds.

The design of the steaming cylinder precludes wetting the apron. Rapid cooling at low horsepower is another feature claimed for the machine. The machine will operate at extremely high speeds or extra low speeds because of the versatility of this hydraulic drive.

Both the finish obtained and the shrink tests are greatly improved, according to the manufacturer.

David Gessner Co., Worcester, Mass.

For additional data, request item F-116, using business reply card on page 228.

NEW Equipment AND MATERIALS

Other items are described on pages 83 and 85

Slasher speed range indicator by Strandberg Engineering.

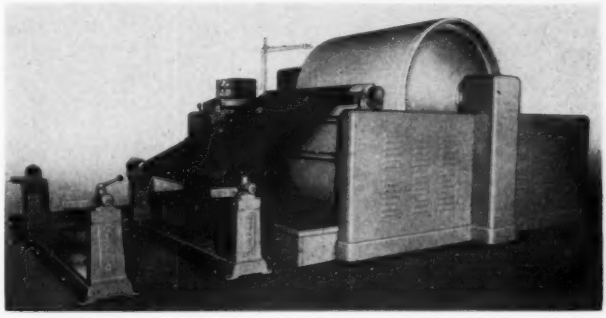
Speed Range Indicator for Slashers

A slasher speed range indicator now on the market is designed to show the operator whether a slasher is being run at the proper speed for the warp to come off with a predetermined moisture content.

The instrument is connected to a bar or roller extending across the full width of the warp, between the dry cans and the warp beam. Varying moisture content changes the conductance between the roller and a grounded bar beneath the warp, the manufacturer states.

The instrument is marked on its face to show the operator of the slasher whether his machine is running too fast or too slow for the warp to contain the proper amount of moisture. If, for example, the instrument is calibrated for a normal moisture content of 7% in the dried warp, and the moisture content were to rise to 7½% or more, the indicating hand of the instrument would immediately swing to "Fast," showing that the speed of the slasher should be reduced in order for the

The 60" Versamatic semi-decating machine by Gessner.



TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

proper moisture content to be maintained. Similarly, too dry a warp will be indicated by a swing of the pointer to "Slow," showing the slasher speed should be increased.

While the instrument is equipped so it may be wired to acommodate automatic speed control and recording devices, its principal purpose is said to be to act as a guide to manual operation, its low price making it attractive in this application.

The speed range indicator may also be calibrated in terms of moisture content for use with other types of equipment.

Strandberg Engineering Laboratories, Inc., Greensboro, N. C.

For additional data, request item F-901, using business reply card on page 228.

Anti-Static Agent for Gelatine Size Also Acts as Warp Softener

Lektrostat GY, a new anti-static agent for acetate, rayon, nylon and the newer synthetic fibers, has been developed primarily for use with gelatine solutions for sizing these fibers.

In addition to its anti-static properties, Lektrostat GY also acts as a warp softener. Thus, the one chemical provides two-way treatment in a single application, the manufacturer claims.

Added in amounts which vary from 8 to 16 lb of Lektrostat GY to 100 gallons of gelatine size mix, the agent has effected these results in slashing and weaving applications made thus far: Warp ends did not stick to the drying cans, split easier at the splitting bars, and showed less broken ends; warps were woven with less shiners; shedding, breakage, and overall loom efficiency and fabric appearance were greatly improved.

Lektrostat GY has a pH of 7.2. In addition to its compatibility with gelatine sizes, the new product will, it is understood, also work with anionics under normal conditions. Use of Lektrostat GY is said to have shown no effect upon the shade of whites, nor to have affected the lightfastness of the colors.

The low viscosity of concentrated solutions of the agent also render it suitable for spray application, and successful use of the product has already been indicated in the blending of raw stock and in garnetting.

Dexter Chemical Corp., Boulevard P. O. Box 1, New York 59, N. Y.

For additional data, request item F-111, using business reply card on page 228.

Fugitive Tints for Wool and Other Fibers

A new line of all-purpose fugitive tints was developed particularly for wool, but is also suitable for blends of fibers such as nylon, "Dacron," "Acrilan," dynel, "Vinyon," "Orlon 81," viscose, acetate, and cotton.

"Blentex" tints are described as liquid dye concentrates readily soluble in water. They can be applied as a spray on the loose stock in the opener, daubed on cones or quills, or applied to the sliver or roving, or by any other means now employed, it is claimed. Sold in concentrated form, the tints should be diluted with water when sprayed on stock or daubed on cones or quills. Proportions of 1½ parts of Blentex to 98½ parts of water will, the manufacturer states, produce a suitable tint solution for proper identification.

When tints are applied in the concentrated form to sliver or roving by means of a marking wheel or similar device, the marks should be spaced so that application is proportionate to about 1% of the weight of the stock. When spotted on the sliver or roving, it gradually spreads itself throughout the stock during subsequent processing so that the final yarn shows an overall tinting.

Blentex tints are said to be readily fugitive in the usual mill scouring treatment, and fugutive even after the tinted yarns have been subjected to steam setting treatments prior to the scouring operation. The tints come in five colors: red, yellow, blue, orange, and purple.

United States Testing Company, Inc., Tint Division, Hoboken, N. J.

For additional data, request item F-113, using business reply card on page 228.

NEW Equipment AND MATERIALS

Air-Type Cloth Folder for Delicate Fabrics

A new type of cloth folder with air-operated table and jaws features a pivoted air cylinder, the use of steel tubing for connections between the cylinder and the table irons, and the use of rectangular steel tubing for the table irons.

The pivoted air cylinder almost entirely reduces the side thrust of the piston against the cylinder walls, the manufacturer states, so that shutdowns to replace packing and the cost of repacking are materially reduced.

The replacement of cast iron by light, stiff tubing for the yokes and table irons has eliminated much of the weight and inertia of these parts and consequently reduces the wear on all the moving parts, it is claimed.

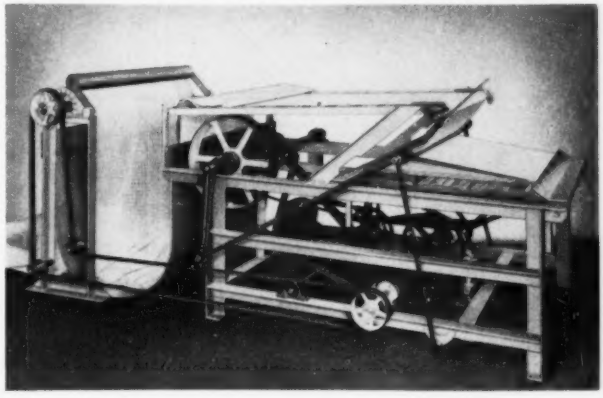
The accompanying photograph shows the No. 2 low top style machine, having the low feed rolls at the back. The machine is also built in the No. 4 style with high feed rolls at the rear and the rails sloping downward toward the operator for inspection purposes. An overhead, or high top style, is also available.

The machine is guaranteed not to break the finish on the finest nylons or other synthetic fabrics.

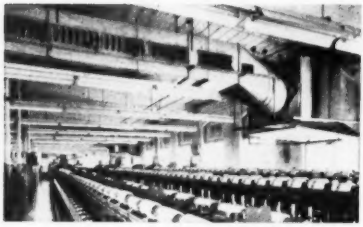
Hall & Jansson Co., 177 Highland St., Worcester, Mass.

For additional data, request item F-109, using business reply card on page 228.

Hall & Jansson cloth folder with air-operated table and jaws.

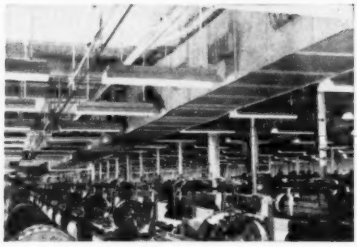


Certified Climate – 1952



Automatic Airchanger with Gradumatic Humidification

Central Station alone—or with Gradumatic Boosters—or with Refrigeration



Gradumatic Humidification

All with Gradual Acting Psychrostat Regulation

Engineering, Manufacturing, and Installing by Parks-Cramer Company

Centralized Responsibility

Specialists in Textile Mill Humidification and Air Conditioning Since 1906

Parks-Cramer Company

Fitchburg, Mass. Charlotte, N. C.

PARKS Certified Climate

NEW Equipment AND MATERIALS

Microtome Prepares Sections for Electron Microscopy

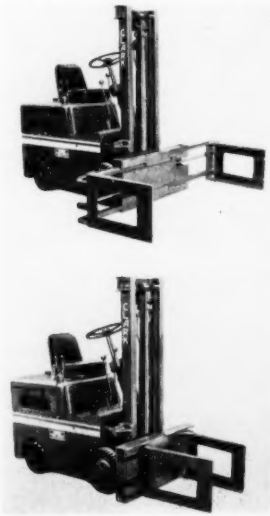
An ultra-high-precision microtome, designed to cut sections of natural and synthetic fibrous materials to a thickness of five-millionths of an inch, has been developed at Battelle Institute, Columbus, Ohio. It is expected that the new "cantilever microtome" will enable fullest use of the electron microscope for textile as well as other types of research. The instrument may also be used in the preparation of specimens for light microscopy. Bearing play is said to have been eliminated by avoiding all bearings or ways in its construction.

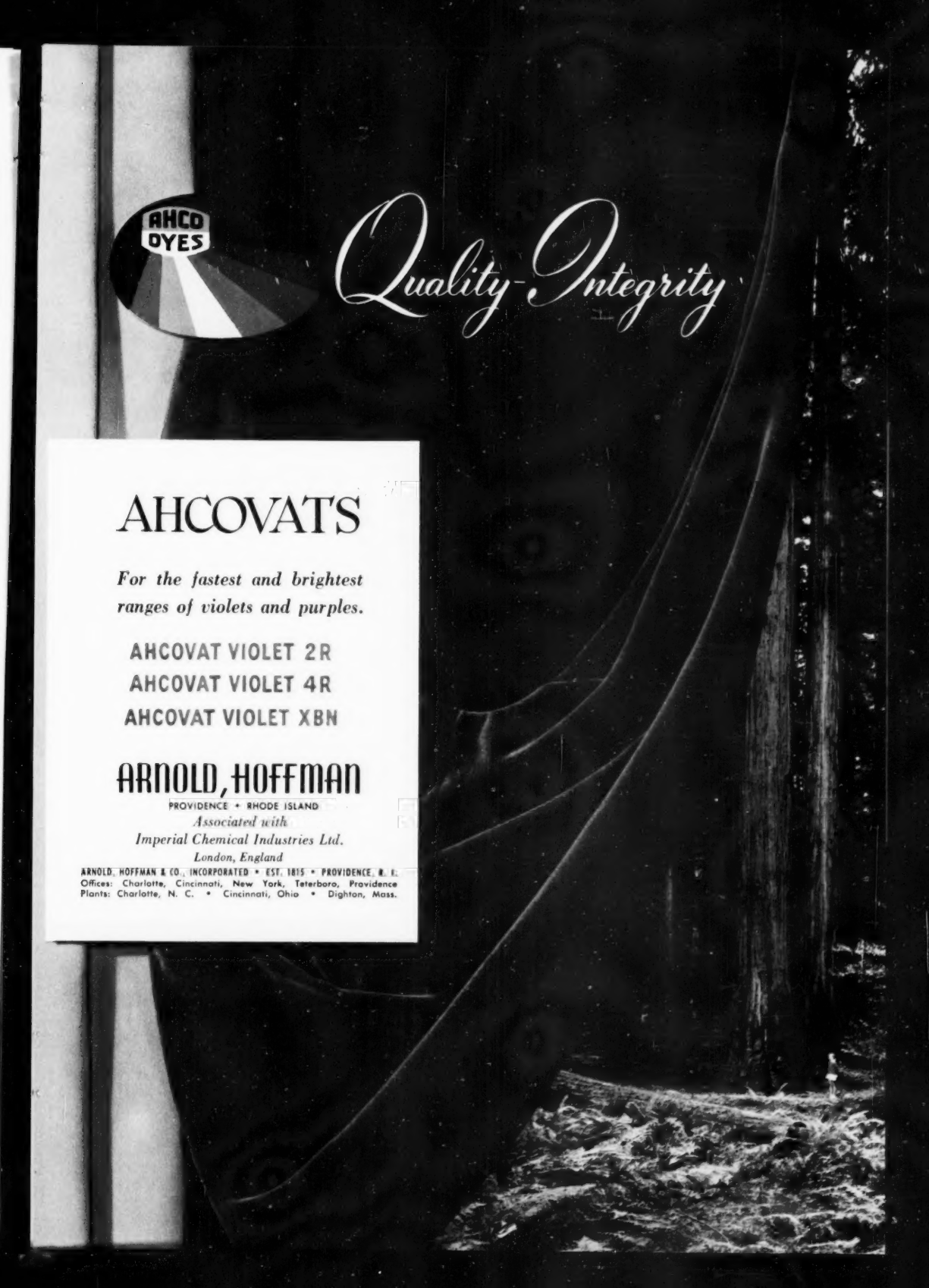
American Instrument Co., Silver Spring, Maryland (F-202).

"Wide-Spread" Cotton Clamp for Clark Fork Trucks

The Clark cotton clamp, for use on electric and gas-powered 2000-pound fork-lift trucks in handling bales and similar items, has been redesigned to incorporate several im-

Clark cotton clamp open (upper photo) and closed (lower photo).




AHCO
DYES
Quality-Integrity
AHCOVATS
For the fastest and brightest ranges of violets and purples.
AHCOVAT VIOLET 2R
AHCOVAT VIOLET 4R
AHCOVAT VIOLET XBN
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ARNOLD, HOFFMAN & CO., INCORPORATED • EST. 1815 • PROVIDENCE, R. I.
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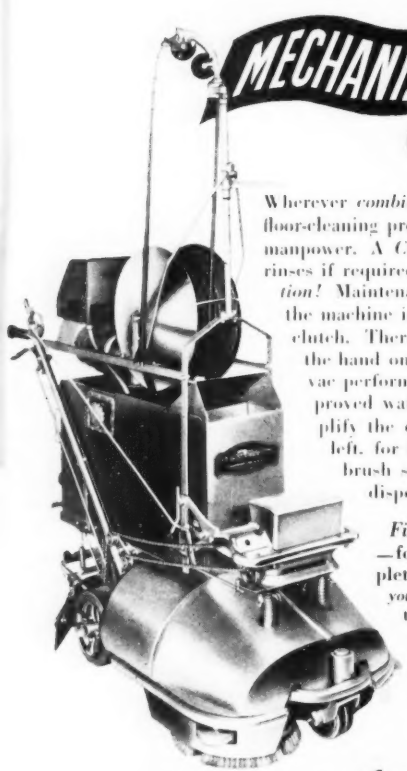
Plants: Charlotte, N. C. • Cincinnati, Ohio • Dighton, Mass.

Let's not clean away dollars and man-hours with costly, inadequate floor care

MECHANIZE your floor-cleaning with a COMBINATION SCRUBBER-VAC!



Wherever *combination-machine-scrubbing* is the practical solution to the floor-cleaning problem, any lesser, slower method is wasteful of money and manpower. A *Combination Scrubber-Vac* applies the cleanser, scrubs, rinses if required, and picks up (damp-dries the floor) — *all in one operation!* Maintenance men like the *four-in-one feature* . . . also the fact that the machine is simple to operate. It's *self-propelled*, and has a *positive* clutch. There are no switches to set for *fast* or *slow* — slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs efficiently and quietly. Cable reel is self-winding. Improved waterproof wiring and minimum electrical connections simplify the cleaning of the machine. *Model 213P Scrubber-Vac* at left, for heavy duty scrubbing of large-area floors, has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour! (Powder dispenser is optional.)

Finnell makes *Scrubber-Vac Machines* in a full range of sizes — for small, vast, and intermediate operations. From this complete line, you can choose the size that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that you can lease or purchase a *Scrubber-Vac*, and that *there's a Finnell man nearby* to help train your maintenance operators in the proper use of the machine . . . to recommend cleaning schedules for most effectual care . . . and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1306 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

Conserve Manpower with Completely Mechanized Scrubbing

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES

provements: Diameter of clamping cylinder has been increased to permit clamp operation under lower working pressures—increased efficiency and longer life of mechanism are claimed; maximum clamp-arm spread has been increased to 69 inches, but overall width of assembly remains at 40 inches; clamp arms have lugs to prevent bale slippage; a telescoping innerslide construction provides added strength and smoother action.

Clark Equipment Co., Industrial Truck Division, Battle Creek, Mich. (F-207).

Stripping Agent for Vat, Sulphur, Direct Dyes

Commercial availability of Peregal ST—a stripping agent for vat, sulphur, and direct dyeing—has been announced. Comparison tests are said to indicate that in many cases the new stripper is ten times as effective as other agents considered excellent until now.

As a weakly cationic material, Peregal ST is reported to form very stable cation-anion complexes with dyestuffs containing sulfo groups, or phenolate groups in aqueous solution. In stripping operations, once the fiber-dyestuff bond is broken, the dislodged dye is preferentially bound to the Peregal ST, for which it has greater affinity than for cellulose. Even after prolonged treatment this equilibrium cannot be shifted toward dyestuff-on-cotton.

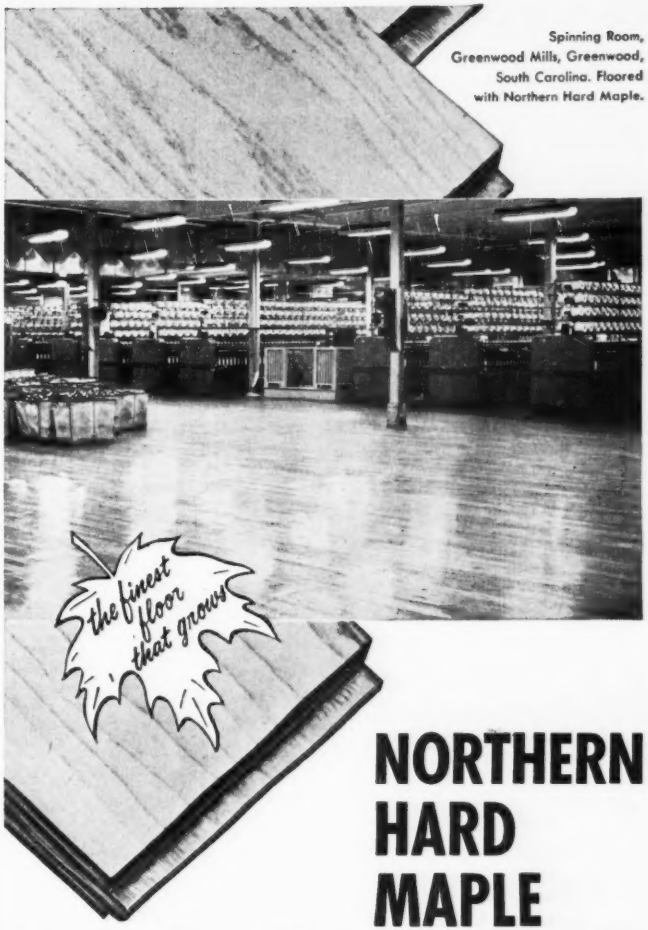
Described as a collodial dye-sequestering agent, the product stems from Antara's acetylene chemical program. Samples and information can be secured from the manufacturer.

Antara Chemicals Division, General Dyestuff Corp., 435 Hudson St., New York 14, N. Y.

For additional data, request item F-106, using business reply card on page 228.

Self-Cleaning Rotary Strainer for Central Station Air Conditioning System

The Type B automatic suction strainer has been developed for textile central station air conditioning systems. A self-cleaning rotary strainer, the unit is said to prevent accumulation of lint in air washers



Spinning Room, Greenwood Mills, Greenwood, South Carolina. Floored with Northern Hard Maple.

NORTHERN HARD MAPLE

deservedly...first choice of the textile industry

Because it has *proved*, through the years, that it makes the best of all textile mill floors, Northern Hard Maple has sold *itself* to the industry, on its merits. Workers like its cheerful brightness and *resiliency* under foot. It's easy to brush clean, creates no dust, harbors no dirt, fights scuffs, scars and dents. It's easy to re-surface and it lasts for years. Even oil soaking doesn't affect its tough strength. The MFMA mill-mark assures it is true to species and right as to grade . . . look for the MFMA mark on the underside. See Sweet's (13k-MA).

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Suite 591, Pure Oil Building, 35 E. Wacker Drive
CHICAGO 1, ILLINOIS

FLOOR WITH NORTHERN HARD MAPLE
BEECH AND BIRCH

Don't Let Copper Restrictions Stump You

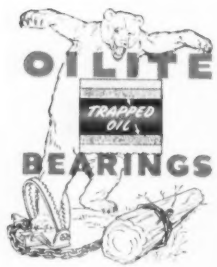
IRON BASE

OILITE

GIVES YOU TOP BEARING PERFORMANCE

- Iron Oilite is an excellent heavy duty bearing material.
- It is a sturdy material, and the load carrying capacity is increased by the hydraulic cushion of the trapped oil with which the bearing metal is impregnated.
- Iron Oilite bearings provide the acme in lubrication; a continuous, unbroken, oil film, on the bearing surfaces.
- Iron Oilite is available in all types of bearings and over a broad range of sizes.
- Iron Oilite is only one of the famous Oilite family of products created by Oilite powder metallurgy.

AMPLEX MANUFACTURING COMPANY
Subsidiary of Chrysler Corporation
Detroit 31, Michigan



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FIELD ENGINEERS AND DEPOTS THROUGHOUT UNITED STATES AND CANADA

Oilite Products include:
BEARINGS, Finished Machine Parts, Cored and Solid Bars, Permanent Filters and Special Units in both **NON-FERROUS** *and* **FERROUS** *Metals*

by removing lint from all water circulated, collecting it, and disposing of it automatically.

Located in the washer tank, Type B strainers prevent clogging of spray nozzles, it is claimed, thus reducing maintenance costs, increasing washer efficiency, and allowing uninterrupted operation. Single standard units are effective for washers handling up to 110,000 cfm; multiple installations are made for larger washers. Units are easy to install and require little attention since they dispose of lint automatically.

Each strainer is controlled by an automatic timer and driven by a ¼ hp motor. Straining screen is of perforated stainless steel; all other parts have corrosion resistant finish.

Bahnson Co., Winston-Salem, N. C.

For additional data, request item F-107, using business reply card on page 228.

Moisture Content Determined Quickly and Accurately

Rapid and accurate determination of moisture content of textile fibers, rovings, yarn, fabrics, etc., can be achieved with a new German-made conditioning apparatus, according to reports.

Construction of the drying chamber is such that hot air is forced through the contents of the chamber. This chamber is automatically and electrically controlled. By means of a heat accumulator, special switching, and a sensitive thermometer, uniform temperature is maintained. A high capacity radial blower forces air through the heater and then through the contents of the conditioning chamber.

To prevent heat radiation into the conditioning room, in which the apparatus is placed, the heater is surrounded by the air intake, so that the air is actually pre-heated before it enters the heater itself.

The ventilator consists of oscillating metal strips which are constructed so as not to affect the weighing system. Control lights indicate when the heater is switched on. The thermometer and switch are jointly mounted on a single plate. A hand switch operates the reversing mechanism for operation and weighing in

CONTROL YOUR COSTS with PRINTWEIGH

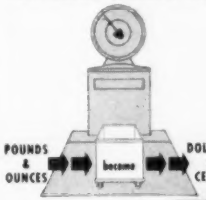
Printed weights keep records RIGHT in textile weighing!

STOP human errors in reading, remembering, recording

Toledo Printweigh Scales can help you *eliminate waste* and *improve accuracy of your control records* in receiving, stock rooms, batching, shipping and other operations in all plants today!

Printweigh stops errors . . . provides *printed* weight records . . . assures you that the accurate indication of the Toledo dial will reach your accounting records without chance of human error. Prints *directly* in big, clear figures . . . on thick tickets . . . on large or small sheets . . . on strips . . . with extra copies. Saves time, stops losses, assures *accurate* weights *accurately* recorded! Send for bulletin 2021 on modern weight control. Toledo Scale Company, Toledo 1, Ohio.

On your scale MATERIAL becomes MONEY



TOLEDO®

HEADQUARTERS FOR SCALES

Let's talk PERFORMANCE

Does your present boarding and preboarding equipment give you top performance for more "firsts" in your hosiery finishing department? If not — you should investigate the features of the Turbo AD-48.

The AD-48 is a dual purpose machine — it preboards with steam or boards with heated air. It has a production rate of 120 to 130 dozen pairs per 8-hour day — with *one* operator. Quality production is safeguarded because operations are automatically controlled — there is no guesswork.

Two groups of 24 forms each, enter and leave the boarding chamber at predetermined intervals. Manual labor is limited to dressing and stripping the forms. Mounted on a collapsible "spider" these move with smooth precision. There is no banging or jolting to injure delicate threads. Operation is gentle as a lamb.

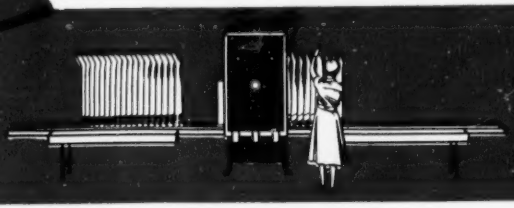
Forms remain upright at all times — fabric will not creep. Their "at rest" position is calculated for maximum speed in dressing, stripping and instant inspection. Forms are easily and quickly changed. Two sizes can be run at the same time.

While primarily designed for automatic production, the Turbo AD-48 can be operated semi-automatically, geared to the operator's production rhythm.

There is a lot more you should know — get all the facts by writing for the complete Turbo story on boarding and preboarding.

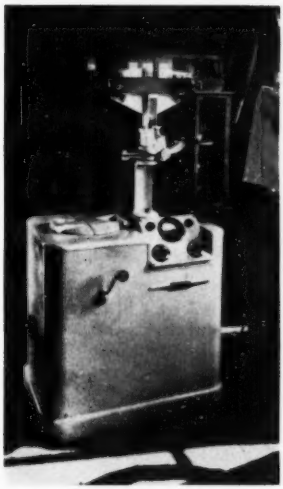
TURBO MACHINE COMPANY
Lansdale, Pennsylvania, U.S.A.
Southern Rep.: F. W. Warrington Co., Charlotte, N. C.

TURBO
"Gentle as a Lamb"



such a way that the actual lift of the balance arm and the entrance of cold air do not influence the weight. Various dryers are supplied with the apparatus which can lower the conditioning period noticeably.

The balance is built to weigh up to



Apparatus for moisture content determination (Hergeth).

2 kg with an accuracy of 1/100 gm. By turning two dials, up to 100 gm may be added or subtracted without opening the dust-proof door of the weighing chamber to add or remove weights.

Hergeth K.-G., Dulmen 1, Westf., Germany.

For additional data, request item F-104, using business reply card on page 228.

Ladder Provides Safety, Saves Time

A step ladder recently developed is reported to be helping employees reach high places safely and saving time in textile mills. Designated the Ballymore Safety-Step Ladder, it rolls easily to any desired position, yet is anchored to the floor as soon as weight is put on the first step.

The ladder has four ball bearing

...New Warehouse Facilities for Atlantic Steel Company Warehouse Division

TO PROVIDE YOU with a wider variety of steel warehouse products and services, a new, modern warehouse is being constructed on a nine-acre tract near our new electric furnace and plant.

Modern railroad siding and truck docking facilities will further improve the rapid service for which our Warehouse Division has already gained a good reputation.

We expect to be in our new home by early fall.

Meanwhile, we are carrying on business from the same old stand with the same enthusiasm and policies that have guided us through five years of service.

If you have a problem involving steel supply or service, give us a shot at it.

Service In Step With Southern Progress

WAREHOUSE DIVISION
Atlantic Steel Company
ATLANTA, GEORGIA • EMERSON 3451

Yarn of Identical Color from 6 Different Beams

. . . because All 6 were Dyed in the Same Bath

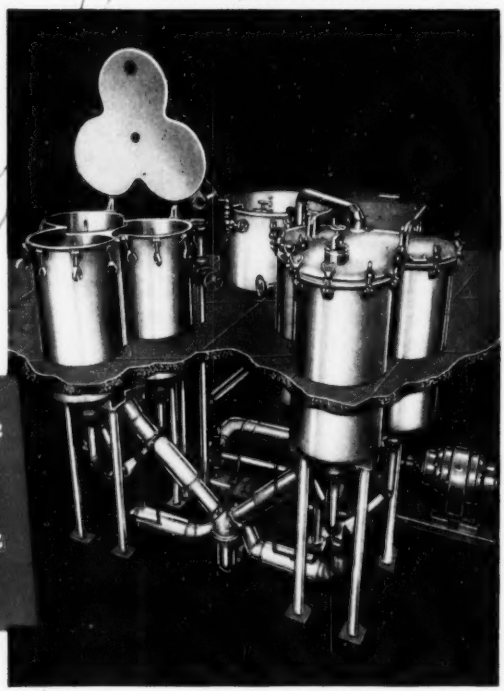
You can be positive of securing identical color only when the different beams or packages of yarn are dyed under identical conditions. And identical conditions are certain only when they are dyed in the same bath!

SMITH-DRUM Combination Beam and Package Dyeing Machines are designed to handle from 2 to 6 beams or yarn carriers simultaneously in the same bath and under identical conditions. This means that each beam or yarn carrier is dyed with the same liquor ratio . . . under the same operating conditions of flow, pressure and temperature . . . with uniform distribution of additions to the dye bath.

If you are interested in absolute uniformity of dyeing results, in economy of operation, in saving of floor space . . . let us arrange to have one of our representatives discuss the possible application of this SMITH-DRUM Machine to your operations. A letter, telephone call or wire will receive our prompt attention.

SMITH, DRUM & COMPANY
432 W. Allegheny Avenue, Phila. 33, Pa.

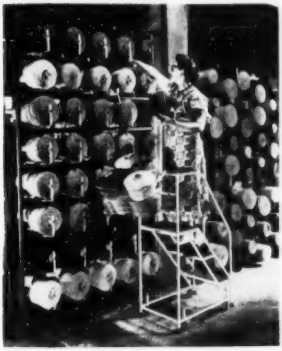
Southern Sales Representatives:
PARROTT & BALLENTINE
610 South Carolina National Bank Bldg.
Greenville, South Carolina



The **SMITH-DRUM** *Machine that Dyes from 2 to 6 Beams or Yarn Carriers in the Same Bath!*

Free copy of Catalog No. PBD-801 will be sent to you on request

NEW Equipment AND MATERIALS



Ballymore Safety-Step-Ladder.

casters that permit easy rolling of the ladder, saving time since lifting and straining are eliminated. Weight on the first step of the ladder raises the casters automatically and four rubber-tipped legs go down to anchor the ladder firmly to the floor preventing rolling, swaying or "kick" out. According to the manufacturer, four-point contact assures the firm anchorage so necessary when employees are reaching high places.

Ladders are all-steel construction with bright aluminum finish. Step plates are non-slip, reinforced expanded steel. Handrails on most models provide extra safety. Available in various sizes for work levels from 6' above the floor to 11'6" above the floor. Special models are also available.

Ballymore Company, Wayne, Pa.

For additional data, request item F-117, using business reply card on page 228.

Coarse Yarn Winder Has Unique Spindle Drive

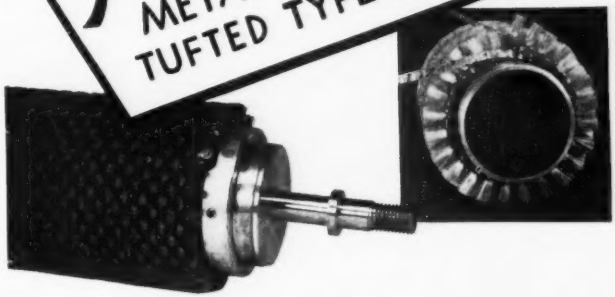
A machine has recently been developed for the winding of solid cops of yarn mainly used in the weaving of coarse fabrics of jute, wool, cotton, linen, hemp, paper, etc.

The use of this machine will, it is claimed, give not only a sound cop but also an increase of up to 50% in the quantity of yarn which can be retained in the shuttle. The setting of the machine for diameter and length of cop is reported to be so accurate that the full internal cavity of the

ANNOUNCING

A NEW METAL-CORE "IN-DUS-CO"

A Superior METAL-WOUND TUFTED TYPE BRUSH

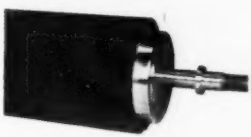


This new IN-DUS-CO brush has tufted nylon or other bristle. The tufted design makes it particularly desirable for blanket washing and other cleaning uses which require the added stiffness that tufts impart.

The tufts are set with solvent-resistant cement into notched bands of stainless steel or copper, wound close to prevent penetration of moisture or foreign matter.

When brushes are cleaned, water flows freely around the bases of the tufts.

The sagless cores are made of aluminum or steel. Shafts are lathe turned on centers for perfect balance. Bristle is renewable.



OTHER IN-DUS-CO BRUSHES INCLUDE:

Standard type brush for even brushing of woolens and worsted, with a uniformly dense nylon bristle surface that raises every bit of nap for proper shearing.

A furnisher brush that is light, strong, and presents a firm bristle surface that presses evenly from end to end of the brush.

As With All IN-DUS-CO BRUSHES,

—Nylon bristle is optional.

—Bristle is replaceable when finally worn down.

—They are the best brushes you can buy for quality and length of service.

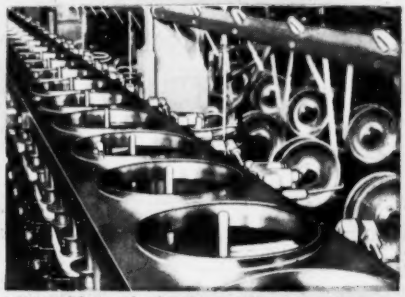
Write for descriptive folder.

INDUSTRIAL *Brush Company*

WOODSIDE AVENUE • LITTLE FALLS, NEW JERSEY

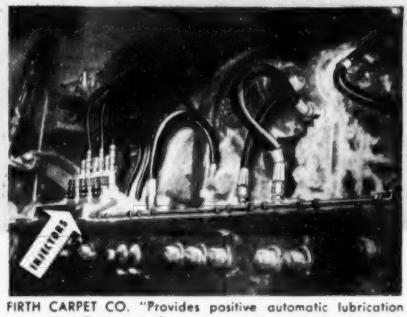
Mill Management Reports on Lincoln Centralized Lubricant Application Systems....

OWENS CORNING FIGERGLAS CORP. "Saves $1303.04 per twister, per year by reducing oil consumption, reducing spoilage and labor costs."



DORR WOOLEN CO. "Travelers are lasting 3 to 4 times as long . . . Saves down-time . . . Frames are much cleaner."

ALEXANDER SMITH, INC. "Saves $1742.00 per loom annually. Equipped 86 machines. Installation more than paid for itself in less than one year."



FIRTH CARPET CO. "Provides positive automatic lubrication where it's difficult and often neglected. No down-time for lubrication."

THESE WORLD FAMOUS MILLS HAVE CONVERTED PREVENTIVE MAINTENANCE TO *PRODUCTIVE MAINTENANCE* WITH

Lincoln

AUTOMATIC CENTRALIZED LUBRICATION SYSTEMS

THESE DIVIDENDS ARE YOURS RIGHT FROM THE START!

1. Increased yield from existing facilities.
2. Sharply reduced operating costs.
3. Systems refund their cost in 3 to 12 months.

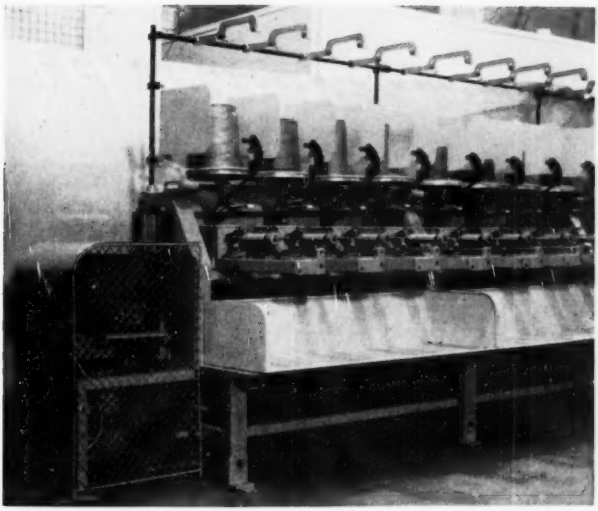
Lincoln's lubrication system specialists will work with you and recommend the centralized system best suited to your new or present equipment.

Write for your copy of catalog No. 80.

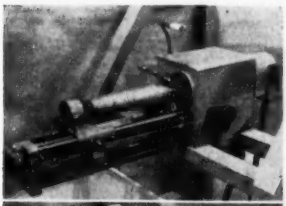
Distributed Nationally Through Leading Industrial Distributors in all Principal Cities

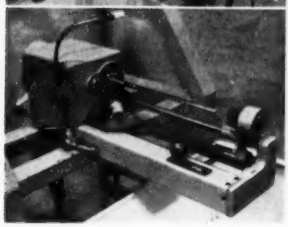
• • • PIONEER BUILDERS LINCOLN ST. LOUIS LUBRICATING EQUIPMENT • • •

LINCOLN ENGINEERING COMPANY · 5702-15 Natural Bridge Avenue, St. Louis 20, Missouri



Above, general view of the Muschamp Model 125 Supercop winder. Below, close-ups showing cone used for varying diameter of cop.





shuttle can be used without fear of affecting the unwinding of the cop during weaving or of damage to the yarn.

The cop diameter is controlled by a steel builder cone, the angle of which is infinitely variable and is adjusted to suit both the required diameter and the type of yarn processed.

A feature of the machine said to be outstanding is the spindle drive and mounting. The spindle and its drive are in one piece, the spindle going directly through the gear box to the rear of the machine where the drive is by means of a belt from a pulley from the main shaft. When for any reason the spindle is stopped, the driving belt leaves the spindle pulley and moves on to an independent free-running carrier pulley. This leaves the spindle completely free to rotate, thus greatly facilitating the piecing of broken ends.

Operation of the machine is simple, reports indicate. A completely unskilled operative can be adequately trained in five minutes, it is claimed.

The front pressure carriage which controls the length of the cop is removed from the spindle with one quick movement of the hand, leaving the cop free for withdrawal from the highly plated spindle.

Standard machines are normally of four, six or eight spindles per section, according to the spindle pitch, with up to 10 sections per frame. The standard machines have been built in two models, to produce cops of up to sixteen inches in length with a maximum diameter of two inches, and cops of 11 inches in length by two inches maximum diameter.

Muschamp Taylor, Ltd., Manchester, England.

For additional data, request item F-110, using business reply card on page 228.

SEE C-D-F FOR FIBRE

ROVING CANS — STRONG AND SMOOTH!

For materials handling equipment specify C-D-F Vulcanized Fibre receptacles. Nothing beats fibre for economy and long life.

Material is tough and mar resistant. Trays, boxes, baskets, cans, barrels. C-D-F builds them all from light, sturdy fibre. You move materials, not useless weight.

LOOM PARTS — ALL NON-METALLIC!

Vulcanized Fibre bushings, washers, binder pins. Fibre cloth roll bearing blocks. Special parts that C-D-F accurately machines. Order by original part number and maker, or send us the old part.

C-D-F's new Southern warehouse is located at Spartanburg, S.C. Celoron gear stock always immediately available. Phone: Spartanburg 3-6397.

WRITE NOW! Write Textile Section, C-D-F, for catalogs showing Vulcanized Fibre receptacles, Dilecto laminated plastic materials, Celoron silent gear stock . . . all made by C-D-F to save you money. *Free 64-page booklet on machining plastics will be included!*

CDF Continental-Diamond Fibre Company

NEWARK, 11, DELAWARE

A KNITTER'S DREAM COME TRUE !!!

SUPREME'S
Amazing, New
Super-Loop Terry Striper!

New, Long-Loop Terry Knit With Automatic 4-Color Stripes!

Opens A Gold Mine Of New Sales Possibilities In Beachwear, Outerwear and Sportswear!

Supreme's Most Terrific Multi-Fabric Sales-Knitter!

Model LT/SA*

Snag-resistant Super-Loops Easily Adjustable For Different Lengths and Densities!

Uses Wide Variety of Natural and Synthetic Yarns For Consumer-appealing Texture Variations!

Variable Striped or Solid Terrys — Light or Heavy Weight — PLUS — The Entire Range Of Model SA Jersey and Automatic Stripes!

Knits Wide Range Of Yarn Sizes For Weights Varying From Heavy Bathrobe Terry To Light Polo Shirt Fabric!

Easily Convertible, On The Job, Into Any Machine In Supreme's Famous Striper Line. Produce The Entire Supreme range of patterned, striped or pattern-placer cloth!

Up To 20 Yds. Per Hour Striped Terry. Up To 30 Yds. Per Hour Single Color Terry. As An Automatic Jersey Striper—Up To 40.5 Yds. Per Hour Plain Jersey and Up To 25 Yds. Per Hour Automatic Stripes.

Pinch yourself and then write for the complete story and sample swatches.

SUPREME
KNITTING MACHINE CO., INC.
107 JOHNSON AVE. BROOKLYN 6, NEW YORK, N. Y.
Southern Representative and Showroom:
The Mallack Co., 711 S. Tryon St., Charlotte, N. C.

NEW Equipment AND MATERIALS

Outstanding Properties Claimed for Water-Soluble Wool Oils

A series of synthetic water-soluble wool oils is reported to have outstanding properties for use on both the woolen and worsted systems.

For the woolen system, the concentration usually required is only 2 per cent of the weight of the wool. On comparative mill runs utilizing Ucon and conventional lubricants, the manufacturer states that card strippings were reduced 18 per cent; ends down in spinning were reduced as much as 90 per cent. In worsted processing, Ucon lubricants lessen fiber breakage and provide excellent spinning qualities, it is claimed.

To prepare for use, the lubricants are simply stirred into water without heating. Uneven results in dyeing and finishing due to residual lubricant are said to be eliminated since the lubricants are completely removed from fibers with minimum scouring.

The lubricants do not thicken, become rancid, or develop hard-to-remove oxidation products, according to the manufacturer; they are non-staining to wool fibers, non-corrosive to textile equipment, and do not attack rubber or leather.

Carbide and Carbon Chemicals Co., 30 East 42nd St., New York 17, N. Y.

For additional data, request item F-108, using business reply card on page 228.

Tube-Tex Machine Attachment Permits Simultaneous Application of Whiteners to Knit Goods

Fluorescent whitening agents can be applied to bleached knitted fabrics by a recently developed attachment for the Tube-Tex wet spreading, extracting, and processing machine. The attachment is incorporated into the solution system of the machine.

With this system, it is claimed, users of the Tube-Tex machine are able to cut down their dyeing cycle, or eliminate the need of rehandling fabrics after kier bleaching.

The application of whitening agents is simultaneous with wet spreading,

People know when it "Runs in the Family"

Sometimes *every* member of a family is a success. And, though each is a specialist in a particular field, all of them contribute to the *family's* reputation.

The world-wide reputation of the house of Anheuser-Busch is like that . . . built by all of its divisions and departments, though each is a specialist in its own right.

The Corn Products Department of Anheuser-Busch is such a specialist . . . with special people and special products devoted entirely to the needs of the Textile Industry. Its technical staff has had notable success in solving problems for textile manufacturers; its advice and facilities are yours for the asking, without obligation.

Making friends . . . through performance and service . . . has been the *business* of Anheuser-Busch for more than a century.

CORN STARCHES — DEXTRINES
GUMS — CORN SYRUPS

Phone or write:

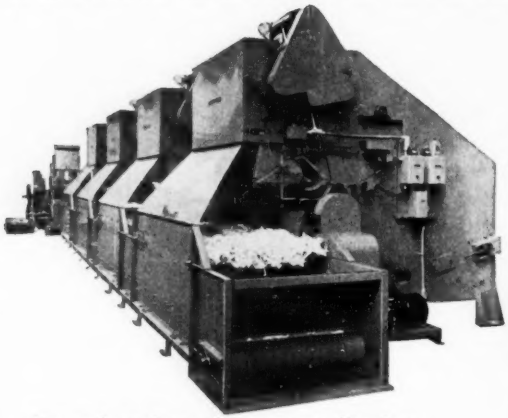
ANHEUSER-BUSCH, INC.
CORN PRODUCTS DEPARTMENT

ST. LOUIS, MO. 721 PESTALOZZI
CHARLOTTE, N. C. 1112 JOHNSTON BLDG.
NEW YORK, N. Y. 33rd & 12th Ave.

3 important advantages

ARE YOURS WITH A

PROCTOR BLENDING SYSTEM



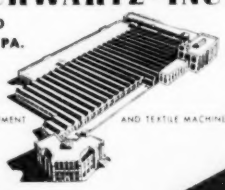
System is engineered to your specifications
Thorough blending within 1%
Last yarn made from blend is identical with the first

Whether the Proctor blending system installed in your mill is semi or fully automatic you can be sure it will be engineered in every detail to your individual requirements . . . and because of this will offer you many important profit-making operating advantages. In many mills using Proctor equipment blending is so thorough and accurate that the variance in the blend is less than 1%. Not only is the mix properly proportioned—but the proportion remains the same throughout the run. This means that the last yarn made from the mix is identical with the first. This is especially important in the blending of synthetics. The system illustrated consists of several weighing feeds with skewing aprons set over a constantly moving long apron which feeds to a picker. The number and kinds of units to be incorporated in a system depend upon many factors which are revealed by a detailed discussion of your specific blending problem. Call on Proctor engineers today to show you how a Proctor system can increase your profit.

Much Proctor drying equipment and textile machinery is covered in full or in part by patents and patents pending.

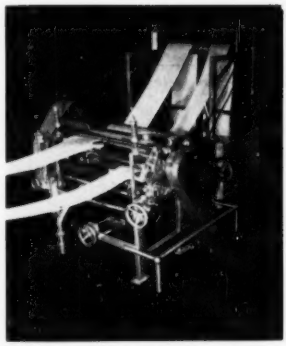
PROCTOR & SCHWARTZ • INC •

610 TABOR ROAD
PHILADELPHIA 20 • PA.



MANUFACTURERS OF INDUSTRIAL DRYING EQUIPMENT AND TEXTILE MACHINERY

NEW Equipment AND MATERIALS



Tube-Tex Machine with attachment for applying whiteners.

extracting, and conventional processing of the fabrics on the Tube-Tex extractor pad.

Tubular Textile Machinery Corp., 33-61 54th St., Woodside, Long Island, N. Y.

For additional data, request item F-103, using business reply card on page 228.

Device for Wool Cards Reduces Variation in Roving Weights

The Bigelow-Sanford Carpet Company has developed a device, known as the "Bigelow Card Compensator," which is reported to reduce the variation in card roving weights to a considerable extent. It is being manufactured by both Davis & Furber Machine Co. and the Whitin Machine Works, and can be readily adapted to woolen cards using any type of broadband feed. Another model is being developed to fit the Apperly-type feed.

The purpose of this compensator, according to Bigelow-Sanford, is to provide a means for controlling the distribution of wool fibers across the card. Tests had shown that there was a general drop in weight of the roving ends toward both sides of the card, and that almost invariably the heaviest ends were in the center of the card. This can be traced directly to the intermediate feed, it is claimed, where the carded web is placed across the conveyor table.

The action of the traveler, which

places the web, was found to be such that less weight of wool is transmitted to the roving ends on the side than to those in the middle. Plotted graphically, it appears as a "bow"—similar to a rainbow—across the card. Driving this traveler faster results in a more pronounced bow.

The Bigelow Card Compensator, by means of an eccentric sprocket, provides a variable-speed drive for the traveler. The traveler slows down as it approaches the sides of the conveyor, and accelerates as it approaches the middle.

Since the web is coming to the traveler at a constant speed, the traveler deposits more weight of wool at the sides and less in the middle. In this way, the weight of the side ends is increased and the weight of the middle ends decreased.

This device is adjustable, allowing adequate control for machine speeds, varying stocks, and yarn weights. It is thus possible to eliminate the variation formerly inherent in the process, Bigelow-Sanford claims, and "flatten the rainbow" of yarn weights across the card.

Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York 16, N. Y.

For additional data, request item F-101, using business reply card on page 228.

New Industrial Luminaire

A new streamlined industrial luminaire, 2FPR-90, is suitable for the operation of two T-17 mogul fluorescent lamps rated at 85, 90, or 100 watts. Features: a rigid lampholder support; a snap-in chain mounting bracket which permits suspension from either one or two points; indexed starters; and a sturdy lamplock to hold lamps with extra secureness in high vibration areas.

The Westinghouse Electric Corporation, Box 2099, Pittsburgh 30, Pa. (F-210).

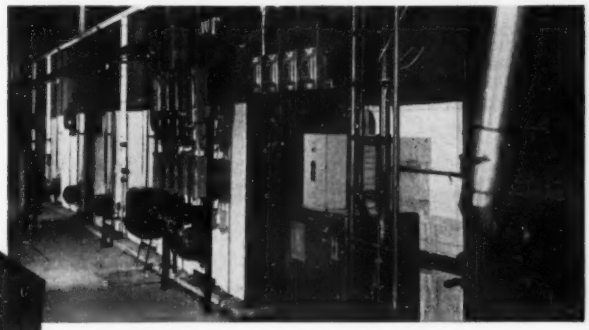
Motor-Operated Cloth Guider Stands

A cloth guider stand utilizing a motor to speed the action of the carriages carrying the guider heads is now being manufactured. Switches on both sides control the movement of the carriages and heads. Carriages can be moved toward one another a distance of 40 inches in six seconds, it is claimed. Exact positioning is obtained by means of an electric brake

3 important advantages

ARE YOURS WITH A

PROCTOR LOOP AGER



Production increased 3 to 4 times per operator

Floor space cut in ½ per yard of cloth processed

Versatility permits aging a wide range of types of fabrics

The new Proctor loop type ager—introduced to the industry only a short while ago—is producing truly remarkable results. A careful check of this modern machine for aging vat colors on printed fabrics reveals that it combines all of the features essential to good aging.

In addition to the three advantages which are highlighted above—the ager operates with a lower steam consumption than older types; there is virtually no leakage of steam; uniformity is excellent for the full length and width of the fabric and the danger of water spots, mark-off and broken selvages common to other types of agers has been eliminated. During the critical part of the aging cycle the printed face of the cloth is not in contact with rolls or other supports and is uniformly exposed to steam atmosphere. For more complete information write today.

Much Proctor drying equipment and textile machinery is covered in full or in part by patents and patents pending.

PROCTOR & SCHWARTZ · INC ·

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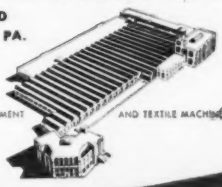
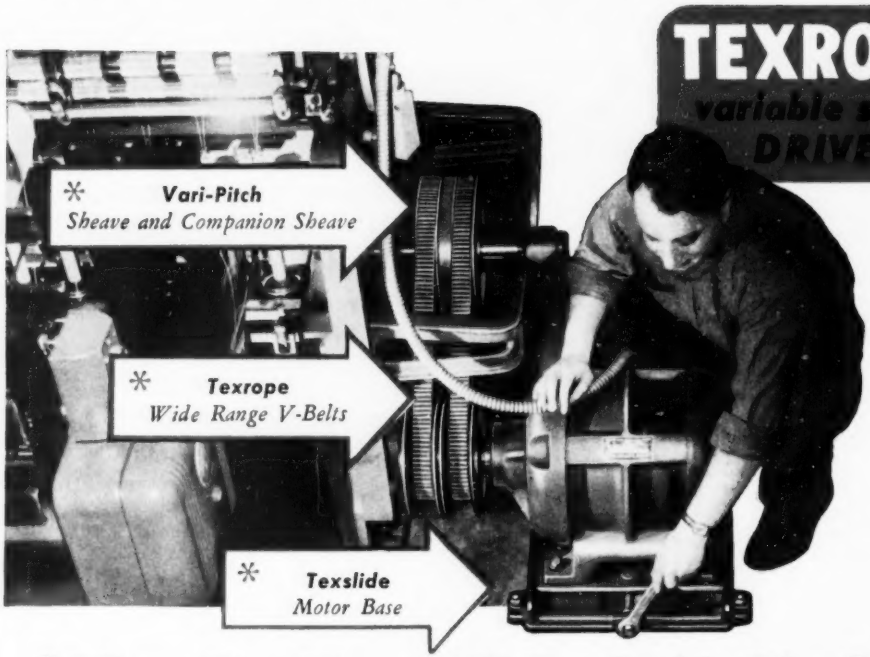


MANUFACTURERS OF INDUSTRIAL DRYING EQUIPMENT AND TEXTILE MACHINERY

Spin ANY Number Yarn That'll Make You Money!



*They Give Your Mill Profitable Flexibility!

SOME MILLS are flexible . . . can spin many yarn numbers. They're ready to take the most profitable orders no matter which way the market shifts.

Does your mill have this flexibility? For example, can you switch from sheeting to shirting? With fixed speed drives on spinning frames, your hands are tied.

If you are limited in the type orders you can handle . . . there's a low cost answer to your problem. A wide range *Vari-Pitch* drive will give you a lot of flexibility for few dollars.

Used with your present spinning frame, motor, and electric control, a wide range *Vari-Pitch* drive will provide almost 2 to 1 speed range. And that means more yarn numbers . . . more types of business . . . more profits.

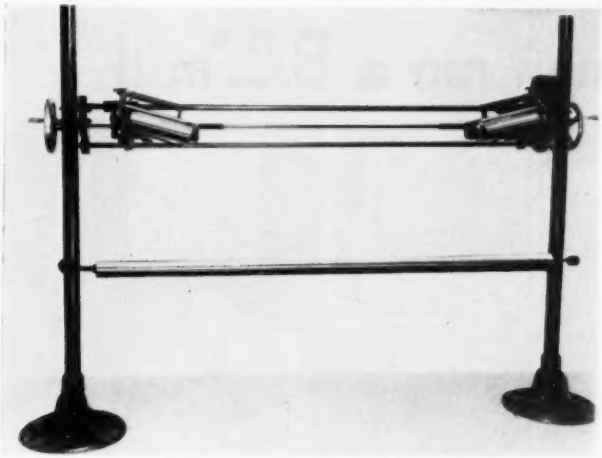
Texrope, Vari-Pitch and Texslide are Allis-Chalmers trademarks.

There are Textile Specialists in each of the cities listed below. Call the nearest Allis-Chalmers office or distributor and find out what wide range Vari-Pitch *sheaves can do for your mill. Or write Allis-Chalmers, Milwaukee 1, Wisconsin.*

Atlanta, Ga.	Chattanooga, Tenn.
Birmingham, Ala.	Dallas, Texas
Boston, Mass.	New Orleans, La.
Charlotte, N. C.	Richmond, Va.

A-3736

ALLIS-CHALMERS



Motor-operated cloth guider stand (Guider, Roll and Service).

operating in conjunction with the motor.

Equipped with the latest type of Hetherington mechanical guider, the motor-operated guider stand is fitted with dual hand wheels for manual operation from either side if desired.

Under development by this same manufacturer is a cloth guider stand equipped with a photo-electrically controlled motor for automatically increasing or decreasing the distance between the guider heads.

Guider, Roll and Service Co., P. O. Box 3747, Peninsula Station, Daytona Beach, Fla.

For additional data, request item F-114, using business reply card on page 228.

NEW Equipment AND MATERIALS

New Synthetic Detergent

Hartopon B, a new development in the field of synthetic detergents, is a pure white paste which is reported to display excellent detergency and sudsing action. It is described as a modified fatty alcohol sulfate manufactured for the textile industry in high concentration.

The detergent is recommended for use in virtually all cleaning operations such as the scouring of silk, cotton, rayon, acetate, wool, nylon, "Orlon" and "Dacron." It is used with great efficiency and economy in jig and box type scouring, in kier boiling, in soaping-off prints and for removal of sizing, oils, and dirt, the manufacturer claims. Hartopon B is

Balance

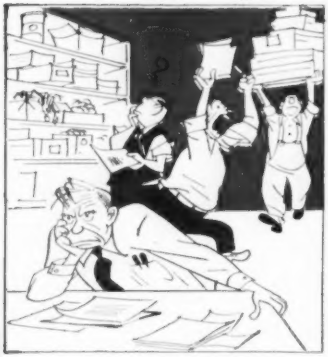
Smooth-running, precision rings
solve spinning and twisting problems.
If you want to be sure of traveler balance and
long wear and smooth running—and all
the other virtues you look for in a ring . . .
just stick, always to

Ragan Rings

RAGAN RING COMPANY • The only manufacturers of Textile Rings in the South • 866 Murphy Avenue, P. O. Box 174 • Station A, Atlanta, Ga.

Representatives: John Foard, P. O. Box 574, Newton, N. C. • Arthur Harris, H. B. "Booch" Askew, 443 Stonewall St., S. W., Atlanta, Ga.
Henry Hersey, Dean Thomas, 44 Norwood Place, Greenville, S. C.

this poor man ran a B.C.* mill

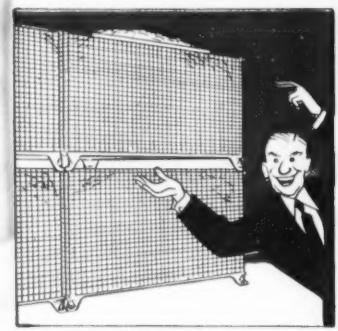


*BC means before Cargotainers . . . this poor chap never heard of them. His storage was haphazard; his shipping was slow; his inventories were seldom made with any accuracy.

To make matters worse, the floor space of his mill was so cluttered up with finished and semi-finished merchandise that operating efficiency and safety were at low ebb.

Needless to say, operating costs were higher than at any time since the founder grew a beard, and they were still going up. Just in time a Cargotainer salesman came to call.

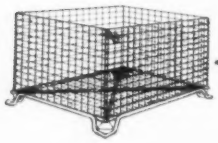
then he saw the light and went A.C.*



*AC—"after Cargotainers"—things were very much different. Even the heaviest of his products were visibly stored, tier on tier, in sturdy open-mesh Cargotainers. He never knew he had so much floor area.

Inventory check was now easy, and all materials and parts remained right in their rugged collapsible Cargotainers as they moved to assembly line and shipment. Safety records went up and costs down.

Moral: If by chance you are BC, you can save by going AC. Without obligation, our Materials Handling Engineers will show you how. Write today. Dept. TI, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.



CARGOTAINERS

by Pittsburgh Steel Products Company

A Subsidiary of Pittsburgh Steel Company

said to be stable in the presence of oxidizing and reducing agents, reduce the harshening effect of vigorous scouring procedures, and possess outstanding protective action, dispersing power, and detersive qualities.

The product is reported to be effective in very low concentrations, clean thoroughly, and rinse rapidly and completely in hard or soft water.

Hart Products Corp., 1440 Broadway, New York, N. Y.

For additional data, request item F-119, using business reply card on page 228.

Machine for Piece Dyeing Cotton, Synthetic Tufted Rugs

The TLBT-X dye kettle, an adaptation of Riggs & Lombard's standard TLBT model, dyes cotton or synthetic or blended fiber tufted rugs in either rope form or full open width.

When it is used for dyeing in rope form, a stainless steel guide keeps the pieces separated. When the rugs are run in open width, an "Electri-Matic" cloth guider keeps the fabric open width, free from wrinkles, and centered in the kettle.

The center post is eliminated for open width dyeing, and the door is one piece, full length. For both types of dyeing, the reel is normally of large diameter and consists of a multi-grip type drum to insure against slippage.

The balance of the equipment used in the dye kettle is similar to that in Riggs & Lombard standard type piece dye kettles regularly used for woolens, worsteds, and blends.

Substantial savings in dyestuffs result from exceptional efficiency in operation, it is claimed, and saving of steam due to totally enclosed top is estimated at 25 to 30 per cent. Construction is all stainless steel.

Riggs & Lombard, Inc., Foot of Suffolk St., Lowell, Mass.

For additional data, request item F-112, using business reply card on page 228.

Electronic Process Controller Features Plastic Cam

An electronically-operated circular chart controller recently placed on the market controls industrial processes, such as piece dyeing and size preparation, according to time and temperature schedules.

The programming function is accomplished through a mechanism which consists basically of a rotating plastic cam—cut to the desired time-temperature pattern—and a cam follower which operates to vary the position of the set-point index in accordance with the contour of the cam. Thus, the process is continually controlled according to the predetermined program.

The transparent cam, which is printed with the same graduations as are on the recording chart, is shaped to the exact time-temperature pattern desired. It is driven by a separate motor and gear train which provide a variety of cam rotation speeds. A clutch enables quick setting of the cam to the precise starting point, or manual adjustment of cam position during operation.

Both the cam and the chart record

NEW Equipment AND MATERIALS

NON-FLUID OIL
TRADE MARK REGISTERED

One in a thousand

7 out of 10 textile mills throughout the country have found that, although there are thousands of oils on the market, it pays to specify only *one* . . . NON-FLUID OIL.

NON-FLUID OIL provides positive lubrication upon split-second demand but does not drip or spatter like ordinary oil—so avoids spoilage loss. Carding, twisting, spinning and weaving production goes up and lubrication and maintenance costs go down with NON-FLUID OIL.

Send for instructive bulletin and free testing sample of NON-FLUID OIL.

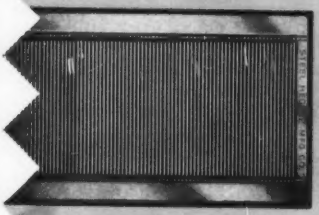
New York & New Jersey Lubricant Co.
292 Madison Ave., New York 17, N. Y.

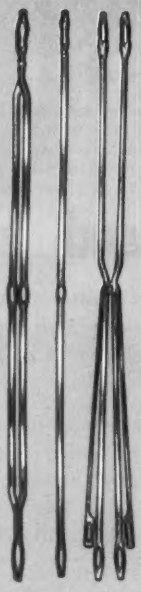
Works: Newark, N. J.

SOUTHERN DISTRICT MANAGER: Lewis W. Thomason, Jr., Charlotte, N. C.
WAREHOUSES: Atlanta, Ga. — Birmingham, Ala. — Charlotte, N. C. — Chicago, Ill. — Columbus, Ga. — Detroit, Mich. — Greensboro, N. C. — Greenville, S. C. — Providence, R. I. — St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

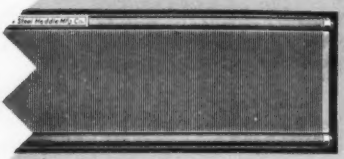
Stehedco





STEHEDCO Flat Steel Heddles • Loom Harness Frames • Loom Reeds (Pitch Band and All Metal, Regular and Stainless Steel Wire) • Loom Harness Accessories • Southern Shuttles (Tempered Dogwood, Fibre and Persimmon Covered) • Drop Wires • Warp Preparation Equipment • Electrode Rods (Fibre and Plastic Insulation) • Creel Stop Motions • Hard Chrome Plated Parts

"WEAVE THE WORLD'S NEEDS."



1-1-4

NEW Equipment AND MATERIALS

are fully visible at all times. The cam plate can be swung out of the instrument case at any time, without interfering with the instrument action. Charts can be changed or the gear train exposed without interruption of production schedules, the manufacturer states.

In fabric dyeing, the instrument is reported to minimize the possibility of off-shades by exact reproducibility of processing conditions.

The instrument is available in all of the standard electric and pneumatic control forms. It is also available with change gears so that seven different cam rotation speeds can be utilized.

Minneapolis-Honeywell Regulator Co., Brown Instruments Division, Wayne & Windrim Avenues, Philadelphia 44, Pa.

For additional data, request item F-102, using business reply card on page 228.

Rayon Plant Mechanizes Reed and Heddle Cleaning

(*Continued from page* 108)

cycle and brush stroke height.

For normal cleaning, heddles and reeds are taken off the looms at six month intervals, or sooner if conditions warrant. The date on which the item is brushed is noted on its frame.

Reeds or heddles are mounted in the machine within seconds. The two variables of stroke and cycle are quickly set, and the motor started. Then, the machine is on its own, effectively brushing, cleaning, or honing, and finally coming to a stop when the desired number of passages is complete. Results — weave superintendent Harold R. LaTour claims fewer loom stops, much cleaner cloth, and less imperfections in the grey. These add up to higher production and quality.

One of the virtues of the "Robot" is its simplicity and sturdiness. It has been in operation for more than six months at Whitin. In that time, neither breakdown nor parts replacement has been experienced.

Taxation Without Limitation

(*Continued from page* 135)

deflationary. Great numbers of our present taxes are highly inflationary. The sales tax disguised as a corporation tax automatically results in inflated prices. The income tax which the payroller does not recognize as a tax results in demands for higher wages. The terrific taxes on individuals result in a severe inflation of salaries, fees, and other charges which make up the incomes of this overtaxed segment of the population.

A recent Associated Press dispatch stated that Charles E. Wilson, president of General Motors Corporation, received in 1951 $556,200 in salary, fees, and bonuses. From this ostensibly regal income, he had to pay the princely sum of about $470,000 in taxes to the federal government, according to a company spokesman.

This means that more than 84 per cent of his income was not income at all, but a tax which was added to the price of automobiles. By the time Mr. Wilson got through paying his other taxes, including the taxes wrapped up in the price of the goods he bought with the remnant of his salary, he was really getting about 10 per cent of his total theoretical income in money spendable for goods and services, exclusive of taxes.

To call an impost of this sort a tax is hypocritical. It is confiscation, which results in a great deal of inflation.

When you read in the newspaper the long list of movie stars who have made $300,000 to $500,000 a year, be sure to remember that from 70 to 80 per cent of these inflated salaries are taxes, which are added to the price you pay when you go to the

NO LOOM *EVER* OUT-RUNS A "SOUTHERN" SHUTTLE . . .

. . . because—world famous "Southern" Shuttles with their—PLUS—design and construction features have the ruggedness and durability to withstand the violent impacts encountered in present day high speed loom operations.

Racing, back and forth, at 40 M.P.H. speeds, making 200 and more picks a minute, perfectly balanced, precision made Southern Shuttles smoothly handle the most delicate and tender yarns without breakage and fray—they unify loom production performance—reduce waste, cut costs and improve the quality of the run.

A member of the great Steel Heddle Family of products, Southern Shuttles always measure up to the quality standards for which all SteHedCo Loom Harness Equipment is noted. They're made in "the World's Largest *Single*-Unit Shuttle Plant" where Shuttle design experts are constantly solving major Shuttle problems, such as: strength of resistance versus mass velocity—and, the results of their efforts is expressed in the eyes, the tips, the grips and numerous other features which always enable Southern Shuttles to set new performance records regardless of the speed of the looms.

Modern Mills . . . Modernize with "Southern"—the Shuttles that "Weave the World's Needs."

108 SERIES

[illegible] plete variety of perfectly precisioned Southern Shuttles Eyes.

STEEL HEDDLE MFG. CO.

2100 W. ALLEGHENY AVENUE PHILADELPHIA 32, PA.

Other Offices and Plants

Greenville, S. C. • Atlanta, Ga. • Greensboro, N. C. • Providence, R. I.

SOUTHERN SHUTTLES Paris Plant . . . Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street Granby, Quebec, Canada

1-L-4

NOW

PROXOL* rates a big big "E" for economy!

Proxol demonstrates its economy in many ways in wool processing. Because of its "built-in" lubricating properties, you need 40% less Proxol than of most other wool oils. Oil shrinkage is at a minimum — in the blend after picking and in roping. Roping weights are exceptionally uniform.

★ THE OIL THAT SMOOTHS OUT PROCESSING WRINKLES

You'll save on scouring costs, too, with Proxol. There's fast complete oil removal, which naturally means cleaner goods. And Proxol insures maximum yarn strength . . . fewer ends down . . . important in keeping production *up* and costs *down*.

Ask your Procter & Gamble textile man for the full Proxol story. It may give you some new ideas on the importance of a truly efficient wool oil.

PROCTER & GAMBLE

TEXTILE FINISHES SALES DEPARTMENT

Made by the makers of Olate, Orvus and Profine.

theater. Furthermore, the taxing authorities are extremely niggardly, penurious, and dictatorial in their interpretation of what may be legitimate deductions before taxes.

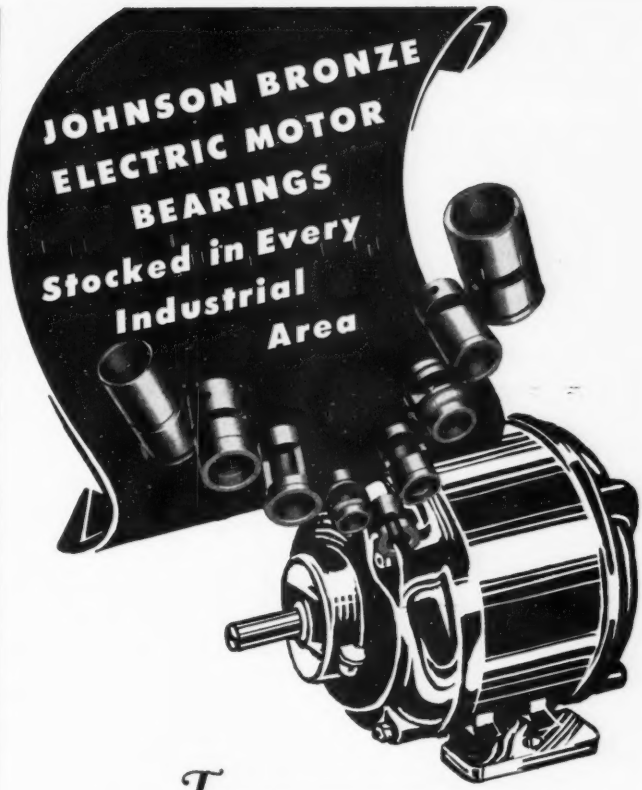
A female movie star must of necessity drive an expensive automobile; wear an expensive fur coat, even if it is too hot for a fur coat in Los Angeles; and own quantities of very expensive clothes. It is a part of her business to appear familiar with this sort of luxury, even though she used to be a dishwasher or a filing clerk. The Collector of Internal Revenue usually holds that the actress' clothes are her own affair, although they are really a business expense if she expects to remain a movie star.

The male movie star is somewhat less grievously situated, but he is seldom allowed to deduct the expense of buying a lot of luxury equipment which is a part of his stock-in-trade as a movie idol. A typical movie star therefore seems to be broke most of the time.

Some corporations manage to make things a little easier for their executives by putting company cars at their disposal and giving them liberal expense accounts. The Collector of Internal Revenue froths at the mouth over these practices, which tend to alleviate the severity of having 70 to 80 per cent of one's income confiscated.

The corporation tax is a peculiarly ghastly fiction. The corporation must of course pass every cent of its taxes on to its customers in the prices of its goods. At the present high tax rates, it therefore appears that a fairly prosperous corporation has made a staggering profit. In the steel controversy, President Truman made the statement that the United States Steel Corporation was making a profit of between $19 and $20 a ton on steel, and could therefore easily afford to give its workmen a handsome wage raise. The President failed to point out, however, that this inflated figure was not profit by any means, but represented the amount of nominal earnings the steel corporation had to accumulate in order to make a modest profit of between $5 and $6 a ton.

The wage increase that the



THIS IS THE MOST COMPLETE motor bearing service on the market. Over 300 different bearings . . . for specific motors . . . are immediately available from stocks in every principal industrial city from coast to coast.

Exhaustive studies of each type of motor were made and leading motor repair shops were consulted. From this mass of information Johnson Bronze determined the correct alloy, the correct design and the correct tolerances for each individual bearing. Every Johnson Bronze Bearing is ready for immediate installation . . . completely finished, with flanges, oil holes, grooves, and slots, exactly to the requirements of your motors. For prompt delivery, call your local Johnson Bronze warehouse.

Write for New Catalog

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
530 SOUTH MILL STREET • NEW CASTLE, PA.

CHOSEN FOR PERFECT TENSION CONTROL

- **FOR THE PACIFIC EVENNESS TESTER**
  A machine that tests for the slightest variations in fiber depends upon the most sensitive tension control. That's why the Kidde Compensator was chosen as standard equipment for the Pacific Evenness Tester.

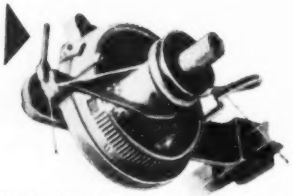
- **BY 500 LEADING TEXTILE MILLS**
  Tension control is a must on synthetic yarns both for quilling and narrow fabric bobbins; and for warping of fabric-covered rubber yarns. That's why over 500 leading mills have chosen the Kidde Compensator to lick one of the major problems of the textile industry.

  Why don't you, too, choose the Kidde Compensator? It's sure to save you spoilage losses from uneven tensions.

  For speeds up to 1000 yards per minute, you'll want the Kidde Double Disc Compensator. It comes in two types – 10 to 140 grams and 100 to 300 grams–and is especially suited for tender, high twist yarns.

  For average speeds and tensions, you'll want either of the Standard Models–6 to 120 grams or 100 to 300 grams.

  Write today for full information.



Standard Model
6 to 120 grams
100 to 300 grams

Kidde

Walter Kidde & Company, Inc.
690 Main Street, Belleville 9, N. J.

President insisted on giving the steel workers' union would therefore come chiefly out of federal taxes, and the precedent established in giving this tax money to the steel workers would at once lead to similar demands from every other big union, and the government would immediately have to slap more taxes on something to make up the deficit, and the employers would have to raise their prices or go out of business, and as soon as they raised prices to accumulate some money to pay taxes, some politician would again insist that this tax money be given to the employees. It is a ludicrous, although tragic, situation.

Not only must corporations make more than double a normal income in order to pay taxes, but they must pay a great variety of state and local taxes which are happily loaded onto the big corporations so that these can collect the money from the small fry in increased prices. The Boston Herald recently pictured the happy and smiling face of Commissioner Henry F. Long, lovingly fingering a check for $4,250,000 from the General Electric Company to cover the Massachusetts State Excise Tax. Commissioner Long termed it "an assessment for the company's right to do business in Massachusetts."

Probably less than five per cent of the product of the General Electric factories in Massachusetts are sold for final use in that state. There is no inherent advantage in having these factories in Massachusetts, but they are there and it would be frightfully expensive to move them. The millions that the State of Massachusetts collects from these plants are paid by the customers of the General Electric Company all over the world.

There has been almost nothing said here that we have not said before, and which will not need saying again. Too many people can not possibly be inspired to think seriously about these vitally important matters. A lot of people may consider it tiresome to be reminded of these things, but it is a whole lot more tiresome to work from 50 to 80 per cent of your time for the government each year for nothing.

DO YOUR EMPLOYEES WALK LIKE THIS?

. . . then it's time to ELIMINATE SCRUBBING and DRY CLEAN your Mill Floors with the TENNANT System

When workers walk like cats, to avoid falls on slippery, oily floors—it calls for prompt action: *dry*-cleaning with the Tennant System! You eliminate scrubbing, save man-hours, get cleaner, safer floors . . . and cut cleaning costs, too.

THE TENNANT *System* . . .

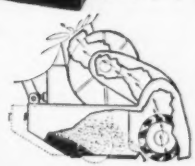
1. RECONDITIONS worn, dark floors. In a few minutes any floor surface can be made like new . . . free of water- and oil-soaked, grimy topwood fibers. Provides a vigorous, smooth floor —sound and dry.

2. HARDENS floors to resist wear. Rapid, effective sealing process fills . . . binds . . . hardens wood fibers. Gives excellent wear resistance and durability.

3. DRY CLEANS . . . ends scrubbing. Fast mechanical cleaning removes dirt like magic! No water or chemicals. Leaves brilliant non-slippery surface that's velvety smooth, clean, dirt-resistant.

WRITE TODAY for FACTS about dry-cleaning, the accepted modern way to get the most from your mill floors. Typical case histories, cost data, results obtained with the TENNANT System.

G. H. TENNANT COMPANY
2524 N. 2nd St., Minneapolis 11, Minnesota



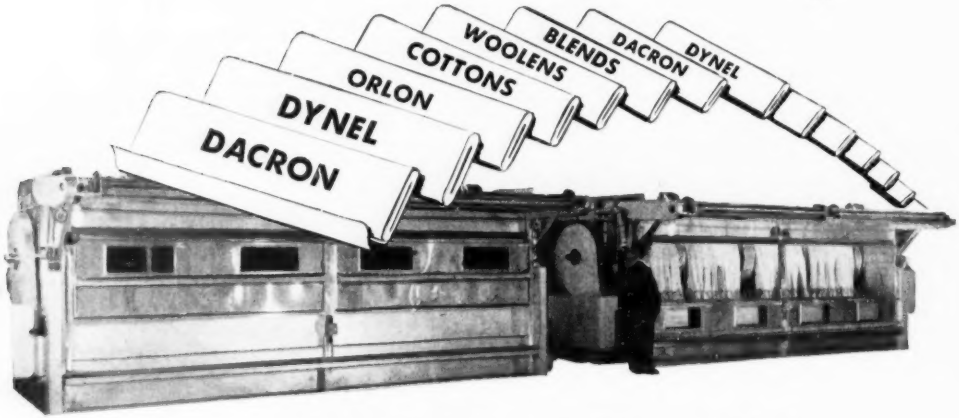
The way to finer floors
TENNANT
Floor Maintenance System

The Tennant System ENDS SCRUBBING and can be used throughout the mill

A one-man operated Tennant Floor Machine CLEANS FLOORS AND PICKS UP SOILAGE!

Self-propelled Tennant Floor Machine has 12" or 16" revolving steel wool roll (or other accessory) that whisks grime from floor. Heavy soilage is hurled into hopper; vacuum picks up light dust. LEAVES FLOOR CLEAN!

Dye "Hard to Dye" Synthetics Easily...



with Type TLBT Piece Dye Kettles

For Fabrics of Dacron, Dynel, Orlon, Etc. —
As Well as Cottons, Woolens and All Blends!

Whether your fabric is natural, synthetic or a blend — our TLBT Dye Kettles do away with piece dyeing problems. Nearest to an all-purpose machine ever offered, our Type TLBT-X dyes the difficult cotton and synthetic rug fabrics with complete success. Among important features of these stainless steel enclosed machines:

★ Unique design and multi-grip type reel avert tangles and tie-ups, reduce slippage.

★ Goods balloon, move around, change folds readily to eliminate wrinkles, creases and dye streaks.

★ Saves substantially in dyestuffs through operating efficiency, in steam costs through design and insulation, in long life and maintenance through savings-insurance features.

Ask for full data on piece dyeing synthetics and other fibers with Type TLBT — greatest advance in piece dye kettle design in 25 years. Our new catalogue page — free on request — describes these fine machines in detail.

RIGGS & LOMBARD, INC.

FOOT OF SUFFOLK STREET, LOWELL, MASS.

"The Fleet Line" — **A COMPLETE LINE** of modern equipment to successfully handle present day wet-finishing, carbonizing and dyeing requirements.

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Textile Industries

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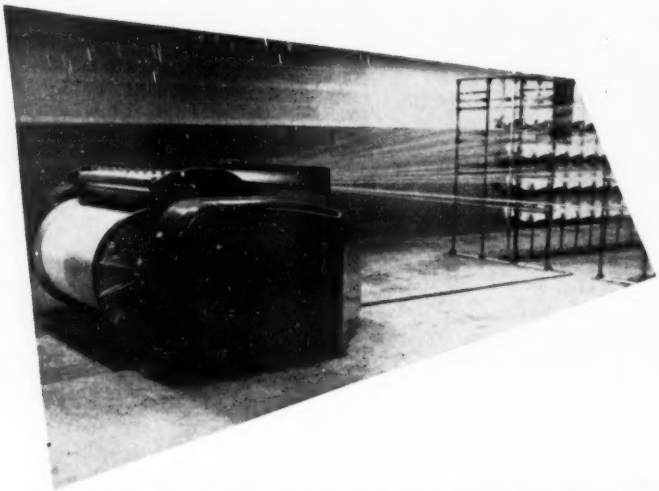

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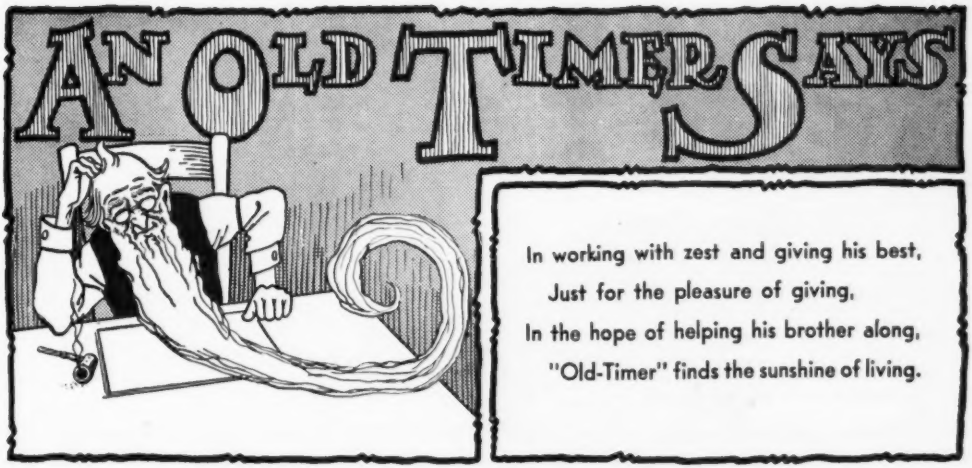
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

What's the Answer?

FOR MORE than thirty years, yes, more than thirty, OLD-TIMER has been making every effort to give you articles on human nature, phychology, and human relations, scattered along and among the practical articles on textile manufacturing.

As most of our older readers of this page know, those articles have been based on a long and varied personal experience. Of course we have read and studied a great deal in order to broaden the ideas, the experiences, and the many "ups and downs;" OLD-TIMER has had experience as an operative, a section man, and on up the ladder as a textile operating executive.

For example, years ago OLD-TIMER had an unfortunate experience in court, a law suit. He purchased a course in commercial law and studied it diligently for over a year in order to prepare a series of articles entitled "Points of Law a Textile Man Should Know." (That series, by the way, drew editorial comment from some of the leading daily newspapers.) But it took OLD-TIMER long hours of night study to prepare those articles.

We are giving this illustration because, no doubt, some of our readers do not stop to think or realize that a writer who has not missed an issue in over thirty years, does not just sit down at his desk and bang out an article when press time rolls around.

No, not at all. OLD-TIMER has traveled thousands of miles and put in sufficient hours of study to obtain two or three college courses, in preparation for these articles.

What we have in mind now is to reveal to you that with all of the work and study, plus the long years of experience in the mill, we have hunted for the answer to what we think is the most important question. Not only for operating textile executives, but for all executives who are responsible for the production of their plants and the human relations of their employees.

In numerous articles on human relations and psychology we have illustrated from personal experiences the more fundamental or proved facts of these great problems—problems (human nature or human relations) which mean the outstanding success of all the great leaders of history, be they textile executives or executives in other branches of industry in this greatest of all nations, the U. S. A.

Of course, there have been other examples or instances, although not directly related to the management of operatives, that were and are, however, closely related to our human relations problems as found in textile plants.

For example, Napoleon did not have the physique of a soldier. He had no special background in his younger days to give the great scientist, the most noted psychologist, or the eminent teachers of human relations an insight as to why he was such a successful leader of people. Or why young men who had everything to live for would gladly give their lives at the

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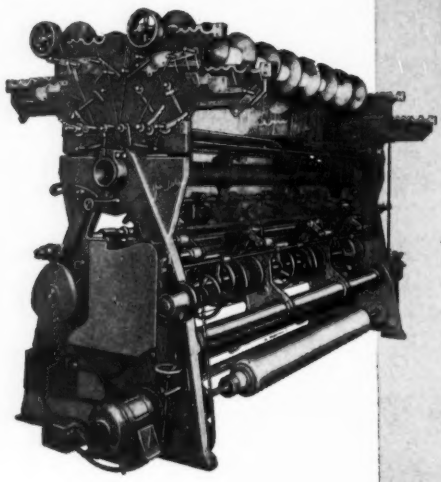

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Viscose Rayon Still King of Man-Made Fibers

"Viscose rayon is still the king of man-made fibers, and it will take more than a mild revolution led by the new fibers to depose this ruler, or cause any severe loss of the empire built up during the past 40 years," Julius B. Goldberg, director of research of J. P. Stevens & Co., Inc., declared at the 121st national meeting of the American Chemical Society.

"The newer man-made fibers are providing us with fabrics which are indeed unusually serviceable, stable, crease-resistant, easy to care for, and luxurious to the hand," Mr. Goldberg said.

"We appreciate their virtues and bow to their charms, but for the present and immediate future they may be regarded as the pastries of our dinner table."

During 1951 approximately 865 million pounds of all forms of viscose rayon were manufactured in the United States, Mr. Goldberg stated. With imports of about 90 million pounds, a total consumption of about a billion pounds is indicated, he said. By comparison, production of the newer man-made fibers totaled some 200 million pounds.

"We are well aware of the fact that many of the newer 'miracle' fibers can yield a better dollar value in some applications due to their contribution of greater length of life in service, higher strength-weight ratios, lowered maintenance expenditures or other cost-reducing elements," Mr. Goldberg said, adding:

"On the other hand it must be remembered that close to two thirds of all man-made fiber consumption is in apparel or household fabrics. As long as the men, women and children, in this country at least, are privileged to wear what they like or what fashion dictates, it has been demonstrated that the serviceability of viscose rayon in well constructed garments of properly designed fabrics is adequate to meet the competition of the newer synthetics, the use of which must of necessity add to the cost of such garments."

slightest indication of his wishes.

Those men had no reward to look forward to, yet they would face death and did die at the beck and call of a man who did not even know their names. Why??? Human nature, as the average human being knows, is the simple law of animal nature, and we human beings are animals, you know.

Just to make clear the thought we are trying to convey, let's analyze a few illustrations.

We boys would slip away from home Sunday afternoons to play baseball in a cow pasture which was a considerable distance from any house or main highway. My position on the team was third base. Well, there was a large tree which stood only about ten feet from third base. That tree, of course, gave me considerable trouble when hot liners came my way. And when the cows began their trip to the barn in late afternoon, this darn tree was right in their path so they naturally had to go around it.

Years and years later when all those Sunday baseball players had grown to manhood and were raising another generation of kids, we were on a trip which carried us near this old cow pasture of our youth. That old exotic feeling forced us to drive a few miles out of the way, just wondering if that old pasture and that old tree were still there or converted into a cornfield, a cotton field, or something else.

By Gosh! There she was. Of course we had to walk out there and find third base and that confounded old tree which was always

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STARTS FAST — LASTS LONGER

Guide to Knitters in the Engineering of a Tricot Fabric

1. Quality, or courses per inch as measured or counted on the machine, as a rule, is not the same as when counted off the machine and the fabric is relaxed. Depending upon fabric construction, courses per inch of relaxed fabric off the machine can be more than, equal to, or less than the courses per inch counted on the machine.

2. A change in length of one runner, as a rule, changes the courses per inch of the fabric off the machine even though the quality on the machine is not changed.

3. If a change in one runner does not change the courses per inch when the fabric is off the machine, the change will be reflected in the wales per inch.

4. Tight qualities (more courses per inch) are produced with short runner totals, and as the runner totals increase the quality becomes looser (less courses per inch) but not proportionally.

5. Ratio affects courses and wales per inch. From the limited number of ratios used it appears as if the courses per inch increase when the ratio increases, and the courses per inch decrease when the ratio decreases for the short runner total. This effect tends to reverse itself for the longer runner totals. It is felt that more research is necessary to determine the magnitude of the effect of ratio on courses per inch.

6. In general, the ball-burst test shows the fabric to be stronger with more courses and a tendency to become weaker with less courses per inch, but not proportionally.

7. Ratio affects fabric strength. By using the same amount of yarn per rack and changing the ratio, a different strength result is obtained. It is believed that each individual amount of yarn "run-in" per rack will have its individual ratio for optimum strength. This individual optimum ratio is often referred to as balancing of the stitch.

8. Runners affect yield. Increased runner lengths give a higher yield. Decreased runner lengths give a lower yield, but not proportionally.

9. Ratio affects yield. Using the same amount of yarn per rack and by changing the ratios, a different yield is obtained. It is believed that each individual amount of yarn "run-in" per rack will have its individual ratio for optimum gray yield.

10. A change in one component of a fabric affects the other components. To be specific, a change in the length of one runner affects ratio, courses per inch, wales per inch, gray yield, gray-fabric strength, and the total length of yarn knitted per rack.

Ralph L. Stimmer, American Viscose Corp., before the American Association of Textile Technologists' April 2 meeting.

In the way. Well, in that we were not quite so fortunate. The old tree was gone—but there was the unmistakable sunken place in the ground where it had been. One other land mark removed any question as to the location of third base. It was the cow path which still curved around the place where the old tree stood years ago. Of course, all of the former cows were gone, but the cows which took their places were still walking around the place where the old tree used to stand.

That, gentlemen, is one of the freaks of animal nature.

That's pretty amateurish, you say. O. K. We will admit it is, but how's this:

You carry your pen knife or your change or something in the same pocket all of the time, don't you? Now, just to test the simplicity of the cow's habits, related previously, and for your own knowledge, tonight when you undress to retire, take your pen knife, your change, your purse, or something, out of the pocket

where you always carry it and put it in the opposite pocket. Tomorrow when you feel in your regular pocket for your knife—then laugh at yourself for forgetting you changed it to another pocket last night.

Oh, well, just leave it there and see how many more times you will do the same thing before you learn the new location of your knife.

Now we can't call that animal nature without adding the word "human" to it, can we? So by heck, that is a freak of human nature, isn't it? And if you will make a study of human nature you will find thousands of insignificant things about human beings which affect the attitude of employees toward overseers, superintendents, and managers, as well as towards the company.

How about this: The great railroad systems of this old U. S. A. have been the greatest incentive toward the progress of this greatest nation on earth. Every citizen in this land of ours has benefited directly or indirectly by that progress. Up until the entrance of aviation and the trucking systems, the railroads provided about the most lucrative employment of any industry to the many thousands of employees who were fortunate enough to be one of its employees.

Would you not think that fact would endear the great majority of our population as loyal supporters, based merely on the fact that all citizens participated in the progress the railroads brought about. But the answer is, No!

In our effort to find the answers to some of the intricacies of human nature OLD-TIMER would ask a number of people what they thought about the railroad's responsibility when a major accident occurred or when the newspapers were headlining some policy the railroads were trying to get installed or even an advance in pay for the employees. Invariably, not just in certain instances but invariably, the great majority of the people we talked to were against the railroads.

We got the impression that to ask any citizen a question about the railroads and without giving the question mature thought—if it was the railroads, they were "agin it." Now, my dear reader, can you give a plausible answer to that one?

Human nature and psychology are correlative. Well, they are at least first cousins and when you go digging into the mysteries of one, you usually bump right into the other. We have studied the works of quite a few noted authors of psychology and almost invariably we run into just plain old human nature all through their reasoning.

That man Bunyan who wrote "Pilgrim's Progress" sure would have made an outstanding textile operating executive. Any person who leans the least toward cynicism should read that book. He will never have any doubts about the fundamental laws of human nature any more.

The foregoing analogy is reflected in the great problem of handling employees and various

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Aluminum bearing holders won't score rolls
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levels of supervisors. The knack of influencing people to run their jobs like you want them to has been and probably will be for quite a long time, somewhat of a mystery.

Still, if we study the simple laws of human nature and apply some common sense psychology, we can go a long way toward solving that mystery. The trouble with most of us as overseers and superintendents, we do not give the matter of influencing people to carry out our instructions sufficient thought. We have a bright idea which will increase production efficiency and we explode that idea to our subordinates without giving the proper thoughts as to how or what those subordinates' reaction or reception is going to be. Sure, that is the way the average textile executive runs his job, and if you are satisfied with being *average*, then that is O. K.

Several years ago we went into detail to explain how we made a life-long friend out of one of our bitterest enemies. That story is too long to repeat, but just an outline fits in here with the effort we are making to point out to you some of those simple laws of psychology and human nature.

We took a job as general superintendent of a couple of cotton mills where the man who was going out was a personal friend of one of the superintendents who was remaining under OLD-TIMER. They were what is generally termed "buddies." They went fishing together and were seen at the pool halls drinking more than men of their positions should.

The president of the mills told OLD-TIMER it would be necessary to discharge this superintendent if he hoped to get the mills straightened out. This superintendent was many years OLD-TIMER'S senior and got his experience as an overseer of carding. Incidentally, we found the carding department in very bad shape—much worse than the other departments of the mill.

You can see what we were up against in going into this man's mill and telling him things to do about his card room. First, he disliked us very much because we took his buddy's job. And next he was a carder before we took off diapers—what could *we* tell him about carding?

Well, right on the start we had a talk with this superintendent which went something like this: We understand that you are not very well satisfied since the general superintendent left and that you are thinking of leaving. We hope you will forget that and stay on in your present position. You have been here a long time—you know the people in this section and we realize you have had a lot of experience. We are new here and this is a pretty big job, so we would like for you to at least stay long enough for us to get to know the job and help us to pull this waste mill out of the hole.

Not having followed the mill president's advice to discharge this man naturally put us on a spot, so to speak, and we realized we had to handle him with "kid gloves."

His mill had a waste department which used up the card strips from the print cloth mills to spin cheap mop yarns. 75% strips and 25% so called "dog tail" cotton was the standard mix, most of which was put into 8s/1 yarns and the remaining amount into 4s/1. He was using a standard picker hopper to make up the mix, simply dumping in 75% strips and 25% of the low grade cotton.

Remember, fellows, this was 30 years ago when we did not know as much about mixing as you fellows do today; neither did we have the blending machines. As you of course know, the hopper would sometimes feed all strips and at other times all cotton. We suggested to Mr. Jones, the superintendent (that is not his correct name), that he try making an all-strips lap for the card and an all-cotton lap for the card. Then we put three all-strips laps and one all-cotton lap on a picker apron to make a 75% strip lap and a 25% cotton lap. That, as you can see, made a fairly good mixing. When this mixing hit the spinning, it was like the sun coming out on a cloudy day.

We told the superintendent and overseer of carding and overseer

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of spinning in the other mill what a wonderful improvement Jones had made in the waste mill and suggested they go over and ask him to explain it to them.

Naturally we can't give you all the details here, but one more illustration will help to bring out the moral we are trying to point out to you. He was spinning 8s/1 yarns with single roving of this card strip and low grade cotton mix. One day in conversation about nothing in particular we remarked, "You know, Mr. Jones, it almost always pays to try a new idea. If it happens to improve conditions, you generally learn something while trying out the new idea."

Then we walked away, but turned back to him and said, "Why don't you try doubling the roving on your 8s/1 spinning." He replied, "Anybody knows to double that draft on waste stock would make it look like link sausage." About a week later he came out to the office and asked us if we had time to go in the mill with him. "I want to show you the impossible," he said.

Well, gentlemen, there was a frame spinning 8s/1 waste yarn with the same hank roving we were using, except it was doubled.

Don't ask OLD-TIMER to explain it to you, but the yarn was more even and the breaking strength increased. Jones soon had all the frames changed and spinners on two more sides.

Again we told the superintendent and other overseers in the print cloth mill to go and see Jones' mill run. Now please realize that OLD-TIMER stayed in the background and let Mr. Jones have all the pleasure of showing his brother superintendent and overseers from the print cloth mill how he had brought the waste mill out of the hole and increased the quality and production to where the mill president and all of us were proud of it. If you men believe OLD-TIMER was "weak" in the way he won this man's confidence—well you are wrong.

To substantiate our method of winning this superintendent's loyalty and at the same time make him a more efficient manufacturer, let us quote from one of the most successful managers of labor. Charles M. Schwab said, "I consider my ability to arouse enthusiasm among men the greatest asset I possess, and the way I develop the best that is in a man is by appreciation and encouragement."

Now don't misunderstand OLD-TIMER's method of handling the superintendent Jones. It is a basic fact of human nature to appreciate kindness, but not flattery.

An ignorant person can tell when you are trying to flatter him. There is a wide difference between flattery and appreciation. One is sincere, the other insincere. One is admired, the other condemned.

OLD-TIMER was sincere in his appreciation of what Mr. Jones did—he increased production, improved quality greatly, and lowered cost.

The paramount point we are

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Does a "Man-Size" Job!

For use between hopper and conveyor.
Delivers to regular cleaning line.
Completely opens and pre-cleans small amount of cotton delivered to each hopper in battery, so that machines in regular cleaning lines do *more cleaning* with *less staple breakage.*
Requires 43" between hopper and conveyor table.

PROVED BY TEST

Shown above is a complete installation of "JUNIOR CLEANERS" in opening room of an Alabama mill.

Manufactured by

GASTONIA TEXTILE MACHINERY CO.

GASTONIA, NORTH CAROLINA

trying to show you as managers of operatives and managers of OLD-TIMER's section men—the knack of presenting an idea to another person, then handling the matter in such a way that the person will finally accept that idea as his own and become enthusiastic in carrying it out. That requires patience, gentlemen—yes, just lots of patience and tact.

Plant the "thought" in the other fellow's mind. Cultivate the "thought" in the other fellow's mind. Cultivate the "thought" at every opportunity. In time you will see it sprout—then culminate into action.

We wish space would allow us to tell you more about our experience with Mr. Jones, but he proved to be as loyal a friend as we had among the whole force of eleven overseers and two superintendents. Or would you call this loyalty?

We left Jones on that job when we moved about 40 miles away. We had some investments in real estate and a crooked lawyer and real estate man got a judgment against us for $30,000 (that was real money thirty years ago). This made the headlines in the daily newspapers.

The day after, or the night after, I should say, seeing this in the paper Mr. Jones rang my door bell: "OLD-TIMER, you certainly treated me square during the years I worked for you. When you persuaded me to save part of my salary, I did not have a thousand dollars in cash. Now I have almost $13,000 and I drove up here tonight to tell you I would like to lend it to you if you need it to pay those *!?*!" Yes, gentlemen, I call that loyalty.

Are we getting away from our subject, "What's the Answer?" No, I think not. Any more than when I go to a ball game and see people who will fight you at the drop of a hat for the ball team they are loyal to, when oftentimes they do not even know all of the players nor have they ever spoken to one of them. "What's the Answer" to that one?

Any textile operating executive who ever finds a way to get textile operatives to be as loyal to the firm that they get their "pork and beans" from or to the overseer they know personally or to the superintendent they know—but maybe not quite so well; to a firm which gives them insurance, good wages, minimum working hours, first aid, libraries, community building, and a bunch of other things too numerous to mention, and then they show their gratitude—their loyalty, if you please—by being more enthusiastically loyal to nine ball players who are hired to play, not by them, but by a man or firm they do not even know —

Oh, heck. It just doesn't make sense, does it?

Still, it is possible for you and me as textile operating executives to learn something from such facts as we have been stating, if we will try to analyze the freaks of human nature and apply psychological thinking to such problems as confront us in our efforts at managing operatives.

We do know that friendly competition among operatives pays off—we know all people have a "bump" of egotism that if handled correctly will work wonders in increasing production and at the same time create a sense of loyalty. Of course, part of our reasoning applies to you as a reader of this page.

What we mean is that if you read the OLD-TIMER page like you read your morning paper, very likely you are wasting your precious time. If you realize that your popularity as a textile operating executive, your happiness, and probably most important of all to you—your income, depends upon your skill in handling people; if you really have the desire, the ambition, and the aggressiveness to accomplish what it is possible for you to do, then you will make a study of such experiences as OLD-TIMER has related in hundreds of such cases on this page, for the past thirty years, and try to profit by them, instead of reading these articles like you do your daily paper or a novel which you read for pastime and pleasure.

You know you only learn by doing. If OLD-TIMER's experiences are logical and practical to you, then why in heck don't you do something about it?

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Personal NOTES
ABOUT MEN YOU KNOW

Cecil Wills, formerly superintendent of converting at Montreal Cottons Ltd., Valleyfield, Que., is now superintendent of the Oneida Bleachery, New York Mills, N. Y.

Clifton Allen recently became superintendent at Monument Mills, Housatonic, Mass.

John M. Thompson, Jr., previously with Winthrop (Me.) Mills, has joined Thistle Fabrics, North Oxford, Mass., as general manager.

Stanley N. McNeilly, treasurer of the Bacon Felt Co., Taunton, Mass., was recently elected president of The

Mr. McNeilly

Felt Association. **William C. King,** The Felters Co., was chosen vice-president; **Herbert S. Blake, Jr.,** secretary; and **Paul Weiss,** treasurer.

Standard-Coosa-Thatcher Co. has announced the appointment of **J. C. Whitt** to the newly created position of assistant superintendent in charge of dyeing at the National Plant. Mr. Whitt was previously with Standard Hosiery Mills, Inc.

Joe Fulbright, formerly fixer, second shift, in the throwing department, has been promoted to second shift supervisor at the Clarkesville Mill of United Merchants and Manufacturers, Inc.

Earl W. Dunmore, retiring president of Utica Knitting Co., was recently presented a service citation by the Quartermaster Association for outstanding cooperation and technical assistance in the field of knitwear. **Russell Lawson** has been named executive vice-president and acting chief executive of the firm, and all the plants are undergoing a survey of manufacturing operations with a view to increasing efficiency.

Robert H. McCarthy, Sr., is the new president of Faith Mills, Inc. **Arthur M. Butler** has been named vice-president and general manager; **Georgie F. Curley,** secretary; and **Joseph J. Maloney,** treasurer.

Garland Sligh, apprentice in the Asbeston Plant of U. S. Rubber Co., Hogansville, Ga., has been promoted to technical assistant to the superintendent.

Frank Ward was recently promoted from first shift head loom fixer to third shift C-6 weave room foreman at the Bath (S. C.) Mills division of United Merchants and Manufacturers, Inc.

Col. John F. Howard has replaced Col. Louis F. Shirley as chief of the Clothing and Equipage Branch of the New York Quartermaster Procurement Agency. He recently returned from four years in Frankfurt, Germany. Col. Shirley has been transferred to an assignment in Germany.

Richard M. Barnholt has been appointed sales manager of the Triangle Finishing Corp., Johnstown, N. Y. He

Mr. Barnholt

was formerly with the M. K. M. Knitting Mills, Inc.

John H. Halford, Jr., has been made vice-president and sales manager of Carvill Combing Co. and executive assistant to the president of Brunswick Worsted Mills, both of Moosup, Conn. He was previously with Forstmann Woolen Co.

After thirty years of service as a textile executive, **T. Henry Wood** has retired as general manager of the Oconee Mills and Sachem Woolen

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Card room bobbins with gun barrel finish inside and out; precision made to your specifications.

Warp spinning bobbins for high speed production and quality yarns . . . made from Hard Rock Maple.

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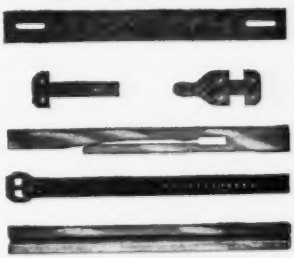
By actual tests one ABC HAIRON Check Strap has outlasted up to as many as six competitive straps.

Make a test in your mill . . . buy 100 lbs. of ABC HAIRON straps and 100 lbs. of straps from selected manufacturers. Have one loom fixer install all straps and keep accurate records.

ABC HAIRON will win out again!



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Personal NOTES ABOUT MEN YOU KNOW

Mills, subsidiaries of the Beacon Manufacturing Co. Mr. Wood will continue with Beacon in an advisory capacity.

On April 30, **Donald Comer,** chairman of the executive committee of Avondale Mills, was honored by citizens, civic clubs, and other organizations of Sylacauga, Ala., for his part in the development of and his interest in the community. The occasion was known as "Donald Comer Day." In his address, Mr. Comer described the progress made through cooperation and diversification of industry and agriculture.

Benjamin Fisher recently succeeded **James A. Valentine** as secretary and clerk of The Kendall Co. Mr. Valentine continues as a director, Mr. Fisher as assistant treasurer. **Robert E. Gregg,** with the firm since 1930, was elected divisional vice-president of the Kendall Mills Division, Walpole, Mass.

John F. O'Connell, with Berkshire Knitting Mills, Wyomissing, Pa., since 1934, has been elected vice-president in charge of finance.

Richard P. Smith, executive vice-president of W. R. C. Smith Publishing Co., publishers of TEXTILE INDUSTRIES, recently became Atlanta

Mr. Smith

Rotary Club's 40th president by unanimous vote. This is the second time in the history of Atlanta Rotary that the son of a former president was elected president. Mr. Smith's father, the late W. R. C. Smith, was the organization's sixth president.

Clovis Gignon, formerly night superintendent of the Webster Mills of American Woolen Co., is now consultant for Woonsocket (R. I.) Spinning Co.

Arthur Crossley has resigned as manager of the St. Croix Mill, Milltown, N. B.

Walter S. Vanderbilt of New York was recently elected president and a director of Southern Worsted Mills, Inc., Greenville, S. C., succeeding J. W. Newkirk, resigned.

Julian T. Hightower has been elected to succeed his brother, the late Robert E. Hightower, as president and treasurer of Thomaston (Ga.) Mills, Inc.

Among the seven alumni of Georgia Institute of Technology who were recently elected to six-year terms as trustees of the Georgia Alumni Foundation are **Fuller E. Callaway, Jr.,** president of the Callaway Foundation, LaGrange, Ga.; **John P. Baum,** vice-president of M. T. Stevens Southern, Milledgeville, Ga.; **Julian T. Hightower,** president, Thomaston (Ga.) Cotton Mills.

Arthur C. McGowen, formerly treasurer, has been elected president of Wyandotte Worsted Co., succeeding **Nat E. Barrows,** now chairman of the board of directors.

Robert J. Painter has succeeded John K. Rittenhouse, retired, as treasurer of the American Society for Testing Materials. He has been on the staff of the Society since 1931. **Dorothy P. Douty** has been named assistant treasurer.

Obituaries

Yates D. Smith, 53, president and general manager of Yates D. Smith Co. and Smith Textile Apron Co., Gastonia, N. C., on May 10.

Louis P. Haight, 84, founder of the Muskegon (Mich.) Knitting Mills and an inventor of hosiery-making machinery.

William W. Neal, president of the Marion (N. C.) Hosiery Mills.

Peter Van Vlaanderen, 78, founder of Van Vlaanderen Machine Co., on April 21.

Walter C. Crain, manager of Crawford and Garner, Inc., Spartanburg,

HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

J. N. ANDERSON, *Treas.*

LAWRENCE, MASS., U.S.A.

Personal NOTES ABOUT MEN YOU KNOW

S. C., on March 19. Mr. Crain was 44 years of age.

George Miles Murray, 57, vice-president and treasurer of Lowell Bleachery South, on April 2.

William T. Rankin, 53, vice-president of Textiles Inc., on April 4.

Amory Coolidge, director of Pepperell Manufacturing Co., on April 2.

Edward F. Parks, 85, retired advisory director of Universal Winding Co. and textile inventor.

Adam Clement, 44, vice-president of Barnhardt Bros. Elastic Corp. and Southern Webbing Mills, Inc., on April 1.

W. V. Norman, vice-president and treasurer of Dundee Mills, Inc., on March 30.

C. Laurence Warwick, executive secretary, American Society for Testing Materials, on April 23.

C. Irving Lakey, representative for Jacques Wolf & Co., on April 15.

What the TEXTILE MILLS are doing

The Newnan, Ga., plant of Chicopee Manufacturing Co. has been leased by the **American Thread Co.,** and will be occupied on July 1 as a spinning plant. Mills Tuttle will be in charge.

Barry Knitting Mills, Inc., Philadelphia, Pa., were recently organized for production of polo shirts for men and juveniles, and women's fine-gauge nylon and worsted sweaters. Jacob Bachove of Streamline Knitting Mills and William Bressler, formerly of Dorco Knitting Mills, head the new company.

Using facilities of the National Research Bureau, the **William Carter Co.** has made provision for distribution of pamphlets on health, handicrafts, civic affairs, reprints of outstanding magazine articles, etc., in the lounges of the home office in Needham Heights, Mass. This new policy of employee education has met with considerable interest, according to E. G. Nickerson, personnel manager.

Dundee Mills, Inc., Griffin, Ga., have under construction a three-story building which will house 5,000 spindles, 40 cards, and supplementary opening and winding machinery. The project is estimated to cost $1,343,000.

Emmo Knitting Mills, 42 Tiffany Place, Brooklyn, N. Y., have been organized for commission knitting of Swiss rib knitted fabrics in 36-in. widths and terry knit fabrics in 60-in. widths. Moe Sorkin heads the organization.

The Turner Falls (Mass.) mill of **The Kendall Co.** has been sold to Crescent Corp., which will liquidate it. All Kendall cotton manufacturing now is done in the South; only finishing plants remain in New England.

Peerless Textiles, Inc., Cleveland, Tenn., have purchased land in Gilmer Co., Ga., and plan to erect an industrial plant with all utilities necessary for the manufacture of textiles.

Reeves Brothers, Inc., has announced that the management of the Eagle & Phenix Division has been combined with that of the firm's other southern plants. Walter Gosnell has been transferred to the division in Columbus, Ga., where he will be

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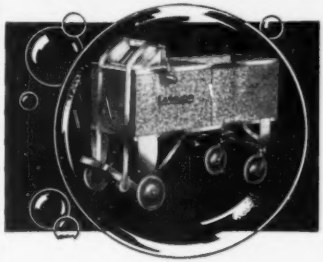
MOPPING TANKS



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RUGGEDNESS and SERVICE

8 styles and sizes of all steel, acetylene welded tanks • 2 or 3 compartments • 30, 60 or 65 gallon capacities • Hand or foot pressure wringers • Perforated roll wringers • Special drain shut-offs • Hot dipped, galvanized chassis and frames • Rubber tired, cadmium plated steel wheels.

LAWLOR
MOP WRINGERS

Copied but never Duplicated!

EASIEST
turning wringer made: there are bearings at ends of rollers.

EASY
to bring rolls together; the foot lever is perfectly balanced.

EASY
to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

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the new B & S

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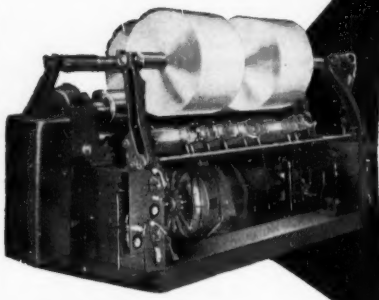

OUTSTANDING FEATURES:

- Simplicity of design
- Variable-speed Drive
- High speed (up to 1500 ft. p.m.)
- Compact—saves space
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- Hydraulically driven differential Rewind Shafts
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- Accurate pressure control between Drum and Rewind Shafts
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- Ease of operation and maintenance
- Efficient and economical

The new B & S #15 Duplex Rewinder is powered by a Louis Allis Eddy Current Type Variable-speed Drive. A variable volume pump driven by an A. C. motor supplies power to the rewind shafts, and the winder is powered by the Eddy Clutch. By placing the entire drive beneath the machine, B & S designers have saved valuable floor space.

Accurate pressure control and precision winding are achieved by pneumatic cylinders for raising and lowering the rewind arms. For full center winding rewind shafts can be locked in "out" position.

To eliminate all possible vibration, the B & S Duplex Rewinder is mounted on heavy cast-iron bedplate. Fully enclosed piping and easily accessible controls assure smoothness and efficiency in operation, as well as ease and economy in upkeep.

For further details write to The Bagley & Sewall Company, Watertown, New York.

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QUALITY MACHINERY
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WATERTOWN, NEW YORK

What the TEXTILE MILLS are doing

general superintendent of manufacturing. He was formerly in the Saxon plant at Spartanburg, S. C.

The former **Cherry Brook Worsted Mill** at Woonsocket, R. I., is now being operated by **Lyn Spinning Co.**, a new company formed by owners of the Murray Worsted Spinning Co., Inc.

Margo Hosiery Co., Thomasville, N. C., was recently incorporated and will manufacture and sell hosiery.

Manny Kaye and Seymour Topping of New York have purchased **Southerland Fabrics, Inc.**, a tricot knitting plant near Burlington, N. C. R. N. Southerland, treasurer under the previous ownership, will remain with the new firm as vice-president and general manager.

The Spool Cotton Co. has opened a newly completed branch office and depot at 4935 Fyler Avenue, St. Louis 9, Mo. Operations at the former location have been discontinued.

The newest unit of the **Greenwood (S. C.) Mills**, to be built at a cost of $6,800,000, will be known as the Durst Plant, in honor of William Londes Durst, textile pioneer and first president of the Greenwood Cotton Mill, known now as the Greenwood Plant. 465 employees who have been with Greenwood Mills for over 25 years were honored recently at the fifth annual banquet of the Quarter Century Club.

The fifth South Carolina plant is being erected at Liberty, S. C., by **Julius Kayser & Co.**, at a cost of more than a million dollars. Built for full-fashioned hosiery finishing and dyeing, the mill will be ready for operation about June 1.

Rayon Fabrics Corp. has merged with **Klopman Mills, Inc.**, with the latter firm taking over the assets and liabilities of the former.

Berkshire Knitting Mills have plans for purchase of additional 60-gauge knitting equipment and conversion of a large number of their present machines to production of Kantrun welt or stockings. About 60% of Berkshire's knitting machinery will be equipped for this purpose when the conversion is completed.

An expansion program, for increased production, is in progress at **Yates Bleachery Co.**, Flintstone, Ga.

Erwin (N. C.) Mills, Inc., have plans for a textile school at Erwin, to be operated under the supervision of the Harnett County School System. The company will provide the necessary space for holding classes, and furnish machinery and most of the equipment. The company also has plans for a one-story addition to its Mill No. 1 in Durham.

Signature Hosiery Co., North Wales, Pa., has been purchased by **A. M. Ellis Co.** The building and most of the machines have been sold, according to A. M. Ellis, while some of the machines have been moved to his other mills.

A new unit for bleaching, dyeing, and finishing knit fabrics is being installed at **Flagg Knitting Co.**, Florence, Ala., at a cost of $250,000. The present dyehouse and drying department will be converted for use by the sewing department.

Two dinners were held recently by **Gaffney Manufacturing Co.** to honor its employees with long service records. Watches were presented to new members of the Quarter Century Club.

The name of **New Jersey Worsted Mills** has been changed to **Gera Mills.**

Wilkes-Barre Lace Manufacturing Co.'s carded yarn plant in Charlotte, N. C., is being sold to a group headed by J. A. Baker of Charlotte, cotton dealer and industrialist. The contract covers purchase only of physical properties.

E. M. Perrone, Waterbury, Conn., is principal incorporator of **New Novelty Tricot Corp.**, Thomaston, Conn., recently organized to operate a mill for manufacture of tricot specialties.

Edwin H. Fitler Co., Philadelphia, Pa., affiliated with Columbian Rope Co., Auburn, N. Y., has asked bids on erection of a mill on the waterfront at New Orleans, La.

The Royce Embroidery Mills, Inc., has been recently established at Reading, Pa., for the purpose of embroidering hosiery and other knit goods products, and a variety of other textile operations.

William E. Wolfe, formerly vice-president and general manager of the

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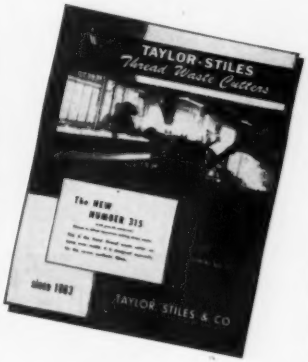

NEW THREAD WASTE CUTTERS

•

This folder describes the new Taylor-Stiles #315, #411, and #415 thread waste cutters. These cutters are specially designed for efficient cutting of synthetic yarns in lengths from 1" to 24" at high production rates.

•

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CUTTING MACHINES & KNIVES

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Mount Hope
ADJUSTABLE BOW EXPANDERS

ADJUSTS
from 0 to maximum bow required—during operation if desired!

Our revolutionary new Ball Bearing Free Wheeling Expander fits all your requirements for all types of fabrics—on all types of machines.

Get the exact spreading requirements easily and quickly—with your machine running full speed. Simple adjustment regulates the bow, without stopping or even slowing down.

This new expander retains all efficiency features of our regular Mount Hope Ball Bearing Free Wheeling Expanders. Tops for experimental purposes, ideal as a spare—it adapts to do the work of any number of conventional fixed-bow devices.

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Write Dept. J for information or for a Mount Hope Engineer to advise you — no obligation.

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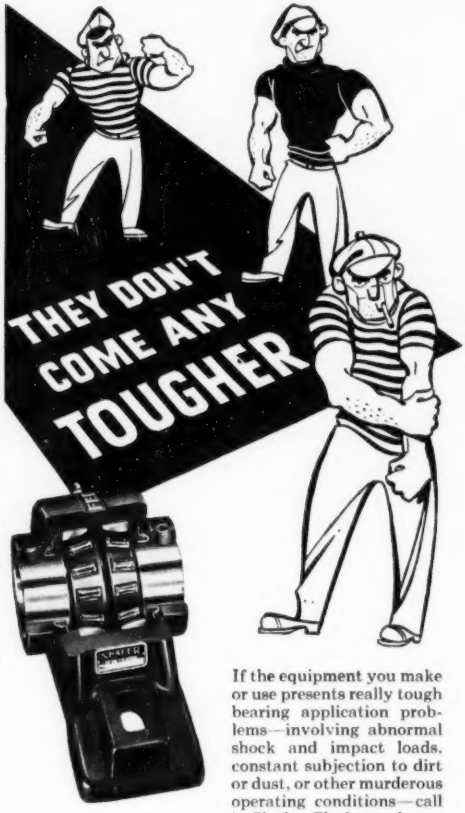

If the equipment you make or use presents really tough bearing application problems—involving abnormal shock and impact loads, constant subjection to dirt or dust, or other murderous operating conditions—call in Shafer. Shafer engineers have helped manufacturers in practically every industry find the solution to their toughest bearing problems. Important reason is: Shafer engineering skill is teamed up with the basically superior ConCaVex design which combines in one bearing the distinct structural and operational advantages of both ball and roller type bearings.

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Scottsboro (Ala.) Knitting Mills, is president and general manager of the newly organized **Wolfe Knit, Inc.**, Camp Hill, Ala. Sportswear and underwear will be manufactured.

The No. 1 mill of **Powdrell & Alexander, Inc.**, at Danielson, Conn., has been sold to Robert W. Gould, purchasing agent for the company, and associates. Operations are being continued without change.

A dyeing, printing, and finishing plant has been opened by the **Rich Port Finishing Corporation** at Palmer, Puerto Rico. The plant covers about 12,400 sq ft.

The rayon department of **Pacific Mills** is being expanded to produce and distribute novelty and plain fabrics, styled specifically for the women's wear field.

Commercial production of an industrial felt called Air Felt has been started by **Alexander Smith, Inc.** Short wool fibers formerly unsuitable for spinning into yarn can now be made into a variety of materials, either by themselves or in combination with other fibers, according to William F. C. Ewing, president.

A community building, to be used primarily as a meeting place for the Women's Club, is being constructed by **J. P. Stevens & Co., Inc.'s** Appleton Co. Division at Anderson, S. C. The company has also announced a new and improved group insurance plan for employees of the Seneca Plant and Utica-Mohawk Plant of the Utica and Mohawk Cotton Mills Division.

The membership of **James Lees and Sons Co.'s** 25-year club has been increased to 400 with the addition of sixty new members, inducted recently at the club's ninth annual banquet.

A new addition to the Gem plant of **Liberty Hosiery Mills** is nearing completion. More than 10,000 sq ft of floor space will be provided for office space, the present office space to be released for shipping and receiving activities.

Loom-Tex, Inc., has shut down its Martinsville, Va., plant permanently. Mill property and company-owned houses will be sold, according to reports.

On March 17 a two-year course dealing with all phases of production, personnel, and processing problems was begun at **Dixie Mercerizing Co.**, Chattanooga, Tenn. The course, designed to give students a broad, basic knowledge of operational procedures of the mercerizing plant, will be the initial undertaking of the Dixie School of Textile Technology, recently organized to offer a two-year training program to Dixie employees.

Samuel R. Pennys & Associates, New York, have purchased the **Southerland's Tennessee Co., Inc.**, mill at Elizabethton, Tenn., and renamed it **Tennessee Tricot Mills.**

Lockport (N. Y.) Cotton Batting Co. has purchased the **Rock River Cotton Co.**, Janesville, Wis., and will move it to Lockport for operation.

Stamina Mills is the new name of the Forrestdale, R. I., plant of William Hollins & Co., Inc., following its recent sale. Dyeing and finishing of viyella fabrics has been discontinued. Robert English continues in charge under the new ownership.

Williamsport (Pa.) Textile Corp., weaving affiliate of Celanese Corp., has been closed and machinery and equipment are being sold.

Mac A. Radom is vice-president and treasurer of **South Pacific Textile Mills, Inc.**, Los Angeles, Calif., recently organized for manufacture of woolen goods.

What the TEXTILE MILLS are doing

Mock, Judson, Voehringer Co., a subsidiary of Mojud Hosiery Co., has a one-story building under construction in the vicinity of the Mojud mill near Wilmington, N. C.

The former mill of Julius Kayser & Co. in Allentown, Pa., has been leased by **Lisle Mills, Inc.**, for increased operations.

Ace Cord Co., Inc. was recently chartered for manufacture of rayon yarns. Louis J. Arena, 1455 Douglas Avenue, North Providence, R. I., is principal incorporator and representative.

The dye house at **Monument Mills, Inc.**, Housatonic, Mass., is undergoing an expansion and improvement program, with installation of additional equipment for duck production.

17th

SOUTHERN TEXTILE EXPOSITION

October 6-11, 1952

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An opportunity to become acquainted with the latest developments in machinery, equipment, accessories, supplies, and techniques relating to the textile industry.

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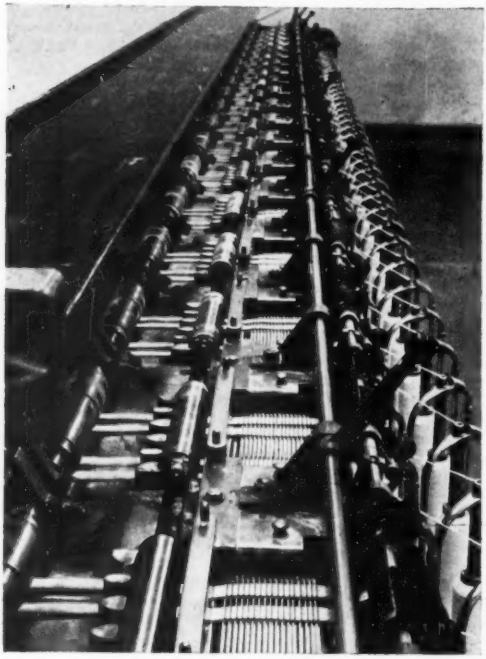

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assures perfect pin control in ALL operations prior to spinning.

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CONSERVE YOUR QUILLS!

Use the

NASH "79" QUILL POLISHER

to relacquer worn quills

You need not discard your old loom bobbins because they are worn or have slight surface imperfections. They can be sanded smooth, and re-coated with finishing material.

If your quills are in good condition, the conventional way of using the Nash No. 79 with steel wool pads, special polish and burnishing pads will produce a perfect surface finish, preventing filament breakage or tranfer of dirt to the yarn.

Failure of the finish coat calls for a complete re-finishing operation on the body of the quill, and the Nash relacquering attachment was developed to meet this need.

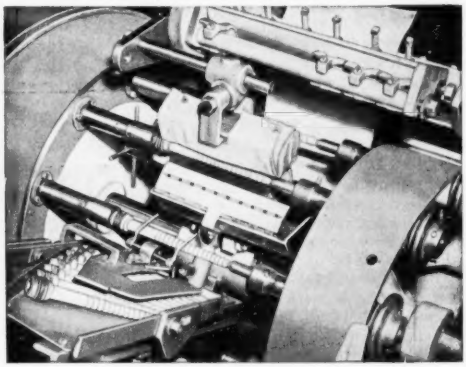
Lacquers 30 to 35 Quills Per Minute

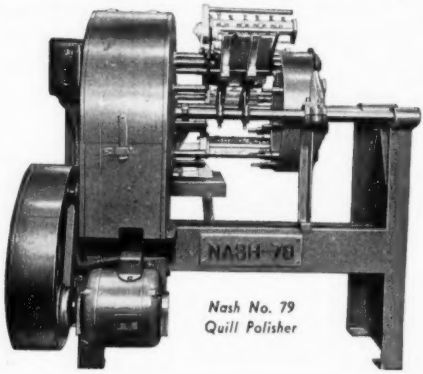
With the relacquering attachment just developed for use with the Nash No. 79 Quill Polisher, you can apply a new coat of Lacquer or else a shellac and oil finish—automatically at 30 to 35 bobbins per minute. The attachment is easily attached or removed.

Write for descriptive material on the Nash No. 79 Automatic Quill Polisher and Relacquering attachment.

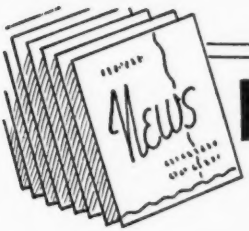
J. M. NASH COMPANY
Dept. QP-79
2390 N. 30th Street, Milwaukee 10, Wisconsin

Close-up of Relacquering Attachment





Nash No. 79 Quill Polisher



HELPFUL Booklets FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES' advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or new Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 228 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES' advertisers.)

This service is restricted to those engaged in operation and management of textile industries.

6-1. Electronic Motor Drive. New bulletin describes and illustrates Reliance's electronic motor drive accessory and brings out the following functions: (1) time-rated acceleration and deceleration and speed changing, (2) pre-set speed selection, (3) automatic speed-changing, and (4) improved speed regulation for adjustable-voltage drives. Reliance Electric and Engineering Company, 1111 Ivanhoe Road, Cleveland, Ohio.

6-2. Refractory Products. Plibrico Jointless Firebrick described in new brochure as being a superior refractory material in plastic, semi-baked form, the consistency of stiff putty, which comes in moist plastic condition ready for immediate use. Method of installation pictured for an oil-fired firebox, boilers, and many other typical installations. Plibrico Jointless Firebrick Co., 800 Kingsbury Street, Chicago 14, Ill.

6-3. Model 40 Controller. New 32-page bulletin describes the eight types of the Model 40 Controller which, with standard specifications or available modifications, can be specifically engineered to control temperature, pressure, flow, pH, conductivity or other process variable. Attractively produced in color, it contains 114 illustrations and diagrams helpful in understanding and applying the advanced principles of automatic control. The Foxboro Company, Foxboro, Mass.

6-4. Hydrogen Peroxide. New bulletin on "Oxidation of Vat Dyes on Cotton and Synthetics with Hydrogen Peroxide" describes typical procedures for each type of oxidation and the advantages to the user of hydrogen peroxide in this process. Becco Sales Corporation, Station B, Buffalo 7, N. Y.

6-5. "Valves of Iron." This new brochure gives, in concise form, the general specifications of this company's standard Iron Gate, Globe and Check Valves. Includes specifications, construction and cutaway illustrations of the different types of valves. The Fairbanks Company, 393 Lafayette St., New York 3, N. Y.

6-6. Centrifugals. To celebrate its hundredth year in business, Tolhurst Centrifugals Division of American Machine and Metals, Inc., has published a booklet which traces the development of centrifugal machinery from 1852 to the present. Pictures trace the development from the early centrifugals to their most modern developments. Tolhurst Centrifugals Division, American Machine and Metals, Inc., East Moline, Illinois.

6-7. Cleaning and Blending System. Brochure pictures and gives the advantages of this company's Blending Feeder, Junior Cleaner, and Blendmaster Cleaner, with a typical layout diagram of an installation. Gastonia Textile Machinery Company. P. O. Box 351, Gastonia, N. C.

6-8. Lint Cotton Opener. Brochure describing the new Cen-Tennial lint cotton opener which is manufactured along the lines of the machine designed and developed by the Southern Regional Research Laboratory, New Orleans, for improving the quality of cotton at the textile mills. The Cen-Tennial is being used commercially, and meets requirements of opening, blending, fluffing and cleaning all in one operation. Cutaway diagram shows internal construction and pictures show exterior design. Cen-Tennial Cotton Gin Company, Columbus, Georgia.

6-9. Water Cooler Placement. Booklet entitled "G-E Work Center Plan for Water Cooler Placement," contains sample floor plans for proper placement of water coolers. A five step method of analyzing the drinking water requirements of any work center. General Electric Company, Bloomfield, N. J.

6-10. Wool Dyers Bulletin. New technical data bulletin describing the use of Telkanol O in a multitude of dyeing applications on wool. Formulated as a levelling agent for use in strong acid solutions, dyers have gradually extended the benefits of its properties to other wool dyeing applications. Dexter Chemical Corporation, P. O. Box 1, Boulevard Station, New York 59, N. Y.

6-11. Canvas Products. A new catalog covering the complete Daniels line of canvas baskets, hampers and trucks gives standard sizes, capacity and special features for each product. Each Dandux product fully discussed. C. R. Daniels, Inc., 4900 Wetheredsville Road, Baltimore 16, Md.

6-12. Cotton Colorimeters. New brochure describes this precision instrument which eliminates human variables and takes the guess-work out of cotton classing. Ease of operation brought out and three steps involved in its operation discussed. Henry A. Gardner Laboratory, 4723 Elm St. Bethesda 14, Maryland.

6-13. Synthetic Fibre Dyeing. A revised treatise on the most up-to-date methods of dyeing most of the new synthetic fibers and blends has been published by General Dyestuff Corporation. The methods described are not final in nature, but they are believed to be the most current ones since they include new data and approaches developed since an earlier publication. General Dyestuff Corporation, 435 Hudson St., New York 14, N. Y.

6-14. Edge Position Control. Bulletin number 141 describes the Askania Edge Position Control which automatically positions moving webs of cloth. Nothing touches the controlled material but a stream of low-pressure air and control is described as being simple, dependable and powerful. Pictures and cut-away diagrams. Askania Regulator Company, 240 East Ontario St., Chicago 11, Ill.

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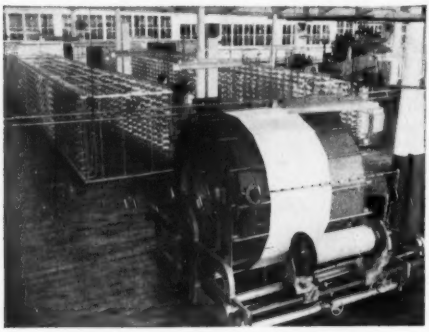

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Home Office: Providence, Rhode Island

6-15. Truck Catalog. A twelve-page condensed truck catalog recently released by the Howe Scale Company, contains specifications and illustrations for the complete line of two and four-wheel hand trucks, trailer trucks, platform skids, wheels, casters, etc. The Howe Scale Company, Rutland, Vermont.

6-16. Electric Trucks. A new 12-page booklet describes generally, the types of Yale electric trucks available, their features, a table to aid in selection, and application data. Trucks discussed available in capacities from 1000 to 100,000 lbs. The Yale & Towne Manufacturing Company, Philadelphia Division, 11,000 Roosevelt Boulevard, Philadelphia 15, Pa.

6-17. High Speed Tricot Machine. The new Reiner high speed Tricot machine is pictured and discussed in their new booklet now available. Actual installations shown and the many features brought out with cut-away diagrams. Robert Reiner Incorporated, Weehawken, New Jersey.

6-18. Overload Release. New 4-page bulletin available giving full information on the new Tri-Matic Overload Release recently announced by Dodge Manufacturing Corporation for their line of Torque-Arm Speed Reducers. All engineering data required for the overload release are shown in a concise manner by drawings and tables. Dodge Manufacturing Corporation, Mishawaka, Ind.

6-19. Liquid Meters. Liquid meters for measuring more than 100 different industrial liquids in processing, batch mixing and cost control operations are described in bulletin number 566. Featured are several pages of meter selector charts which give complete engineering and specification data to assist in selecting the meter best suited for a specific application. Neptune Meter Company, 50 West 50th St., New York 20, N. Y.

6-20. Analysis Interpretation. The booklet "Interpretation of Analysis for the Layman" describes many of the common analytical tests made on surface-active materials, and illustrates how the analytical figures are used to deduce the composition of several materials. The booklet also contains a glossary of many terms useful to those who work with industrial chemicals. Nopco Chemical Company, Harrison, New Jersey.

6-21. Hydro-Pruf. Literature describing the Arkansas Company's new durable, water repellent finish that will be of interest to textile manufacturers who are plagued with problems of finishes failing too early in life of fabric. With an initial spray rating of 100 by the A.A.T.C.C. spray test, a drop only to 90 is reported after as many as 20 dry cleanings of one acetate-viscose gabardine, according to the literature. Other advantages fully discussed. Arkansas Company, Inc., P. O. Box 210, Newark 1, N. J.

6-22. Record Retention. "A Basic Plan for Record Retention and Destruction" is the subject of a new brochure released to aid management in the intelligent planning for disposition of business records. Actual reproductions of various forms used for record retention and destruction along with a checking chart listing the various types of records, and the time element recommended for their retention. Remington Rand Inc., 315 Fourth Ave., New York 10, N. Y.

6-23. "See Better—Work Better." Bulletins No. 6 and 7 are the latest issues of a series of publications dedicated to promoting better lighting and thus improved production in nation's industrial mobilization program. General Electric Co., Nela Park, Cleveland 12, Ohio.

6-24. Hosiery Package. A handy sample file of stock and special printed cellophane hosiery envelopes is offered as a ready reference for the buyer of hosiery packaging materials. E. W. Twitchell, Inc., 2859 North 3rd St., Philadelphia 33, Pa.

6-25. Industrial Capacity. A new booklet, beautifully done in color, is a digest of the Westinghouse way of doing things—it sets forth quickly and concisely the ingredients of Westinghouse capacity to help you produce more. Westinghouse Electric Corporation, 306 Fourth Ave., Pittsburgh 30, Pa.

6-26. Electronic Transmission and Control. New 6-page illustrated data sheet explains the Autronic principle and how the Autronic Control System utilizes electronics for automatically measuring and controlling process variables such as temperature, pressure, level and flow. A system circuit diagram is included along with a discussion of a typical application. The Swartwout Company, 18511 Euclid Ave., Cleveland 12, Ohio.

6-27. Speed Reducers. New 48-page bulletin describes the complete line of De Laval double worm and helical-worm gear speed reducers. Complete data included on horsepower, output torque and center distances for reductions up to 6400:1. Detailed information on how to select double reduction gearing. De Laval Steam Turbine Company, Trenton 2, N. J.

6-28. Organic Chlorine Compounds. New booklet that covers the family of "Organic Chlorine Compounds," describes the eleven organic chlorine compounds sold by this company; their uses, physical properties, specifications, and shipping data. Bibliography of important references included. Carbide and Carbon Chemicals Company, 30 East 42nd Street, New York 17, N. Y.

6-29. Fibre Blending. With so many new fibres now available for blending, with each other and with natural fibres, the blending becomes a matter of prime importance. Thus begins a new booklet on Proctor's fibre blending equipment, and it goes on to picture and describe their systems, with cutaway diagrams. Proctor & Schwartz, Inc., 7th Street and Tabor Road, Philadelphia 20, Pa.

6-30. Fungicides. New booklet describes typical applications on the entire line of "Dowicide" germicides and fungicides for mold and bacteria control. Physical and chemical properties discussed. Dowicide Sales, The Dow Chemical Company, Midland, Michigan.

6-31. Steam Generators. New illustrated booklet on the automatic, self-contained Clayton Steam Generator, with details on specific industrial applications of the equipment in reducing costs of steam at constant levels of temperature and pressure. Operational data, and information on the models and sizes available. Clayton Manufacturing Company, El Monte, Calif.

6-32. Variable-Area Flow Meter. A new 40-page handbook has been published by Fischer & Porter Company to aid in the selection and sizing of variable-area meters. A complete description of variable-area meters, tubes and floats and their comparison with variable-head meters, as well as calibration prediction data. Fischer & Porter Company, Hatboro, Pa.

6-33. Motorpumps for Air Conditioning. New picture type bulletin illustrates the various types of Motorpumps manufactured by Ingersoll-Rand, and their uses in the air conditioning field. The booklet shows a number of installations using Motorpumps on air conditioning service, such as cooling towers, evaporative cooler and condenser water handling. Ingersoll-Rand Company, Resale Department, 11 Broadway, New York 4, N. Y.

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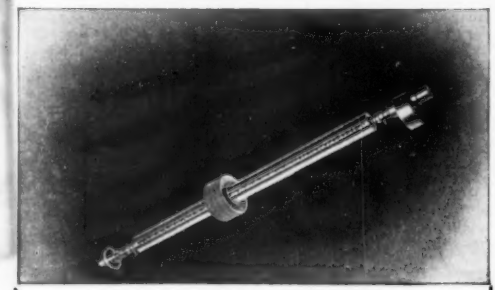

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GENERAL, ECONOMIC, MANAGEMENT

5 FACTORING AND FINANCING—Illustrated booklet on how factoring works, cost and credit information — TEXTILE BANKING COMPANY, 55 Madison Ave., New York, N. Y.

14 TEXTILE WEIGHT CONTROL—Forms 2009 and 2010, showing how Toledo Printweight weight records cut costs by eliminating human errors at the scales. Special purpose scales for the textile industry fully discussed.—TOLEDO SCALE CO., Toledo, Ohio.

17 A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK—8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Parke Ave., New York, N. Y.

18 FACTORING—Information available on how factoring works to aid client in keeping capital fluid and to avoid credit losses. Inquiries regarding these services welcome.—L. F. DOMMERICH & CO., 271 Madison Ave., New York 16, N. Y.

19 INDUSTRIAL BUILDING—A 32-page booklet entitled "U.S.S. 12, U.S.S. 17 Stainless Steel Walls and Roofs for industrial Buildings," is now available for distribution. This publication illustrates the use of type 410 and type 430 Stainless Steel Sheets in the construction of industrial and semi-industrial buildings.—U. S. STEEL CO., 525 William Penn Pl., Pittsburgh 30, Pa.

PLANT AND PLANT MAINTENANCE

108 MAPLE FLOORING—Booklet describing finishing of Northern Hard Maple Flooring — list of M.F.M.A.-approved heavy-duty floor finishes.—MAPLE FLOORING MANUFACTURERS ASSOCIATION, Pure Oil Bldg., 35 East Wacher Dr., Chicago 1, Ill.

109 CARD STRIPPER—Portable dustless card stripper described in bulletin 1050. Advantages of dustless stripping when combined with thorough brush stripping. Used alone or with other systems discussed. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

124 GRADUMATIC HUMIDIFICATION — Bulletin 1151 shows advantages of this graduated air and water pressure system of direct humidification. Psychrometric control also described.—PARKS-CRAMER COMPANY, Fitchburg, Mass.

135 SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

145 META-CLEAN — Complete literature describing Jarrett's Meta-Clean, a new non-inflammable, non-irritating, odorless, concentrated liquid cleaner which greatly reduces cleaning time of looms and other equipment along with small parts, according to the booklet.—CECIL H. JARRETT CO., INC., Newton, N. C.

148 UNI-FLO ENGINEERED AIR DISTRIBUTION—Bulletin F-4471 presents a brief picture of the complete Uni-Flo line of engineered air distribution products. This folder illustrates and describes Venturi-Flo round ceiling outlets, Line-O-Flo linear, and Uni-Flo square ceiling outlets. Grilles, registers and other accessories also discussed.—BARBER-COLMAN CO., Rockford, Ill.

155 DUCTLESS AIR CONDITIONING—24-page illustrated Catalog No. 2 on Amco humidification and ductless evaporative cooling, along with other Amco humidification devices. Contains relative humidity tables and textile regains.—AMERICAN MOISTENING CO., Providence, R. I.

162 MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, 2530 N. Second St., Minneapolis 11, Minn.

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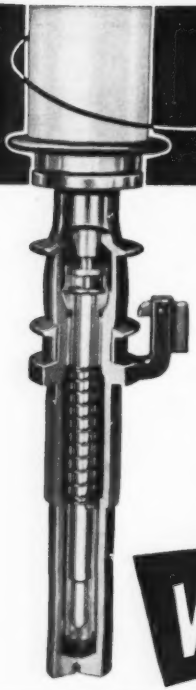

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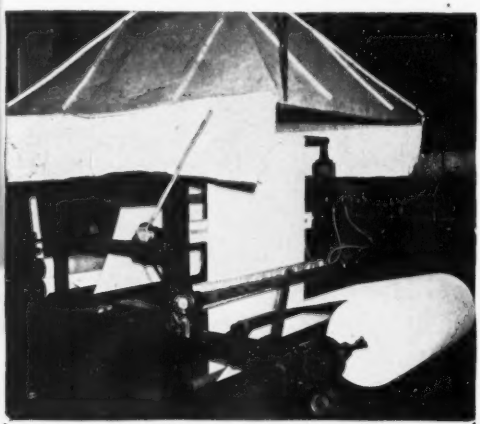

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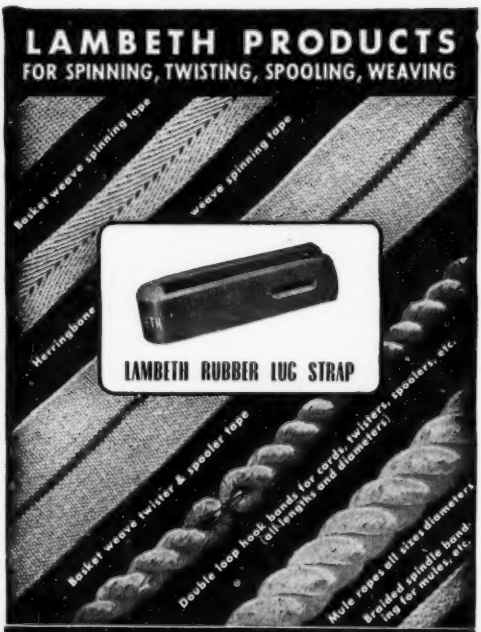
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172 **VENTILATING FANS**—Bulletin 3339 gives facts on Buffalo Ventilating Fans.—BUFFALO FORGE CO., Buffalo, N. Y.

174 **PAINT STRIPPING BOOKLET**—Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and 4) tank immersion.—OAKITE PRODUCTS, INC., 22 Thames St., New York 6, N. Y.

189 **POWER-ROOF VENTILATOR** — Propellair Sky-Blast roof ventilators with airfoil section propeller 16" to 60" in diameter; air deliveries 2820 to 41,000 CFM described in bulletin 680.—ROBBINS & MYERS, INC., Propellair Div., Springfield, Ohio.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION

204 **G-E MOTORS**—Bulletin GEA-5338 ontains information on the new line of life-time lubricated, unit-bearing FHP motors.—GENERAL ELECTRIC COMPANY, Schnectady 5, N. Y.

209 **BROADSIDE F.L.B. 300** — A condensed catalog showing Trico fuses, fuse clip clamps, test clamps, fuse pullers and all types of automatic oilers. Available upon request.—TRICO FUSE MFG., CO., 2948 N. 5th St., Milwaukee 12, Wisc.

213 **ELECTRICAL SPECIALTIES**—Catalog No. SS72, 64 pages, lists manual and magnetic motor control and accessories, safety switches, Multi-Breakers and electrical specialties.—CUTLER-HAMMER, INC., 361 N. 12th St., Milwaukee 1, Wis.

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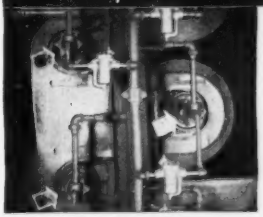

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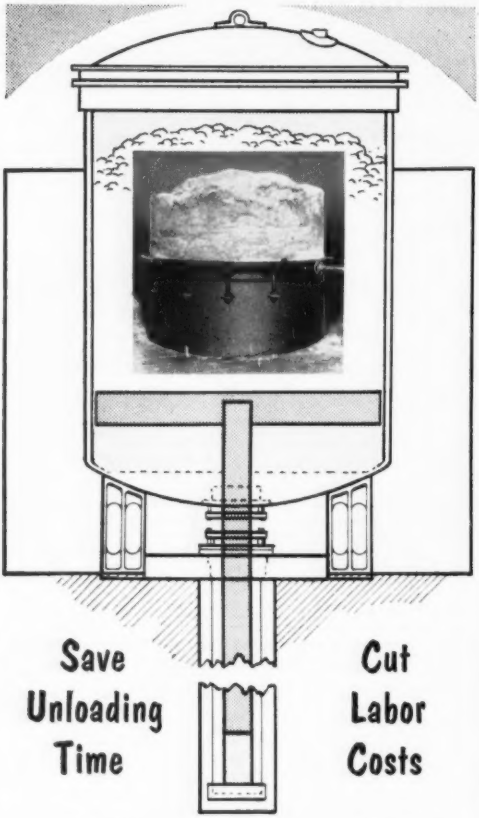

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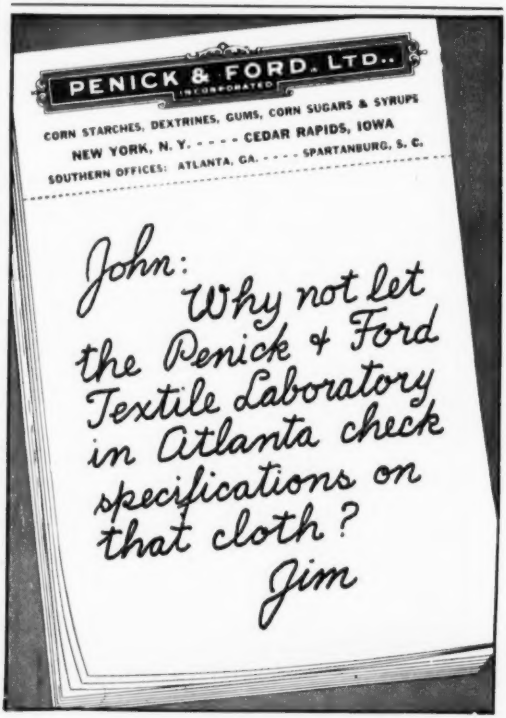
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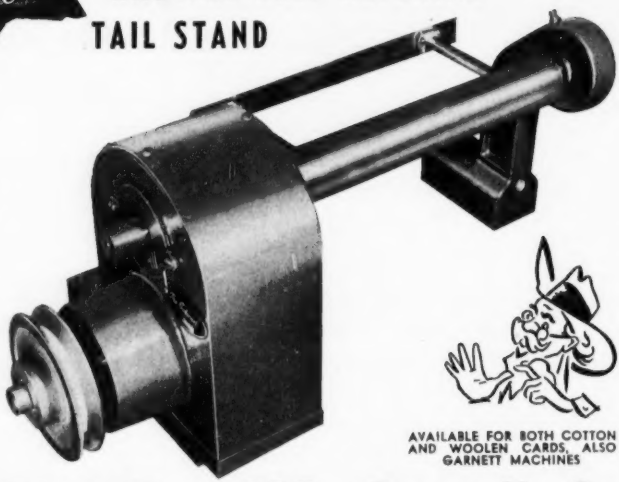

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Ginning-Spinning Tests

(*Continued from page* 112)

and staple is necessary. To find ways of doing this means that all segments of the industry will want to work together to find a practical way to market cotton on its true quality value. This viewpoint is expressed in the report, "The ideal perhaps would be some marketing system or practice which would reflect variety values and high quality ginning in the price which the grower obtains for his cotton."

2. Any machining of cotton is deleterious to the original value of the fiber. The ginner and farmer realize this. With the help and cooperation of the entire industry they can find ways to prepare quality lint with a minimum of machining. Much work has to be done to find control instruments for gins and better means of separating trash from roughly harvested cotton. Another means of getting quality ginning is to find methods of marketing cotton according to its mill values as suggested in (1) above.

3. The story about how overdrying, as well as over machining, harms lint must be told. This test was one of the best demonstrations of that fact. Still the whole industry will want to continue its cooperation to find proper equipment to help the ginner dry his cotton to the ideal for ginning efficiency and lint quality. The work under way in this field should be continued and encouraged by a united industry.

4. The spinner has shown himself to be among the most progressive of all industrialists. The modernization he has completed since World War II is proof of that. While he is cooperating with other segments of the industry in both immediate and long term projects for improved ginning, he has opportunities to help himself in his own mill. Spinners are already doing just that in their own mills and in cooperation with other organizations. Two instances will prove the point:

A spinner representative on the Cotton Quality Committee has recently published data on the work in his mill to improve fabric quality by using blends of constant fiber fineness; and all spinners have given real encouragement to the nep studies at North Carolina State's textile school.

This cooperative approach to quality problems is an outstanding characteristic of today's spinning and today's cotton industries. The inter - industry ginning - spinning test is a prime example of a united industry cooperatively solving its problems.

Slashing Synthetic Fibers

(*Continued from page* 121)

shedding can be the direct result of overdrying.

With high warp counts, the use of the double size box will reduce shedding just as it helps avoid soft warps. The addition of gelatin and gelatin base products is believed to reduce shedding when British type gums are the base.

It should be remembered that the loom shed should contain some size as well as fiber, for if there is not some size, the size is not functioning at maximum efficiency.

Knees. Knees are a common fabric defect in sateens and result from: (1) too heavy size or too harsh warps causing gouts and knots to be beaten up as loops in the cloth; (2) insufficient stretch at the slasher; (3) soft warp beams; and (4) insufficient tension on warp in loom.

Slashing Other Synthetics. Sizing the hydrophobic fiber yarns, such as nylon, Orlon, Acrilan, dynel, and Dacron is somewhat similar to trying to paint a glass rod with a thin paint.

Experience shows that the hydroxy alkyl starch ester gum series used with polyvinyl alcohol and wax makes an adaptable size. Added weights of 15 to 20% of this size are required to give good weaving protection. This size, applied in this range of added weights, appears to have overcome the rugged clinging in the shedding motion of 100% dynel warps.

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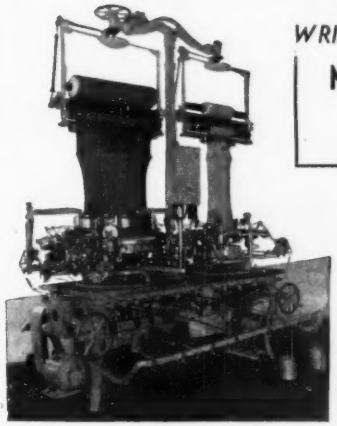

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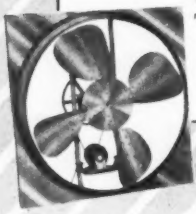

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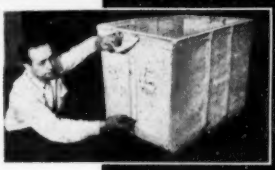

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- **Heavy duck sleeves for holding body to frames**
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Heavy-duck sleeves for holding body to frames is a feature you'll always find in every Lane basket. Lane deeply embeds short stitches into these heavy weight canvas sleeves and the body to give you maximum wearing strength where it is needed most.

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static too much for you?

If static is causing waste, interruptions and slowdowns in your machinery, here's good news! Static can be completely eliminated . . . safely and inexpensively . . . by the Simco "Midget"! Send for information, without obligation.

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CHICAGO, ILL. Wood & Hutchinson, 222 W. Adams St.
NEW YORK, N. Y. Empire State Bldg. Room 2806
PROVIDENCE, R. I. Mr. L. T. Howick, 827 Industrial Trust Bldg.
HIGH POINT, N. C. Mr. E. J. Holbrook
GASTONIA, N. C. Mr. T. C. Smotherman

SUPPLIERS News

WHAT THEY ARE DOING

W. S. Murphey Co., Atlanta, Ga., has been appointed exclusive representative for the **J. C. Paddock Co.** in Georgia, Alabama, Louisiana, part of Tennessee, and Mississippi. The Murphey Co. has five salesmen in the territory, with a branch office in Birmingham, Ala.

Louis S. Graichen is the new technical representative in the textile colors division of **Interchemical Corp.**

Mr. Graichen

He will make his headquarters at the Pawtucket, R. I. office.

Allis-Chalmers Manufacturing Co. has announced the appointments of Albert A. Knauss as Boston district office manager; George Wampler, manager of the Memphis district; S. E. Bovim, manager of the Chicago warehouse sales unit, and L. E. Ackmann, manager, Peoria branch.

Virginia-Carolina Chemical Corp. opened its new Vicara office at 500 Fifth Ave., New York City, recently. Lee B. Whitcomb is in charge.

Sterling Electric Motors, Inc., have opened new sales offices at 1658 Roundhill Rd., Baltimore, with E. Stephen Farlow as manager; 319 Castle Blvd., Tulsa, to be managed by B. G. Jordan; and 63 Liston Rd., Buffalo, with J. W. Byrnes in charge. A sales office at 12 San Jose Ave., New Orleans 21, La., has also been opened with J. D. Trice as manager.

J. Ebert Butterworth has succeeded Harry W. Butterworth, Jr. as president of **H. W. Butterworth & Sons. Co.**

Louis W. Bishop has resigned as president of **Hunt Machine Works, Inc.**, to return to his former position as director of the South Carolina Research, Planning, and Development Board.

James V. Lester was recently elected treasurer of **Standard Pressed Steel Co.**

Joseph Deinet retired recently after more than 25 years of continuous service as research chemist for **E. I. du Pont de Nemours & Co., Inc.**

The plant of N. V. Walker Co., at 714 Division St., Elizabeth, N. J., has been taken over by **Aula Chemicals, Inc.**, formerly in Jersey City.

John P. Maguire & Co., Inc., has announced the promotions to vice-president of Charles R. Catlin, Edward J. Cunningham, Thomas J. Lea, John P. Maguire, Jr., and Louis J. Moran. Lester Prink was named secretary.

Stephen C. May has been appointed Atlanta, Ga., sales agent for **Warren Steam Pump Co., Inc.** His territory includes Georgia, South Carolina, parts of Florida, North Carolina, and Tennessee.

Mr. May

Walter R. Shepperd, with **Stein, Hall & Co., Inc.**, for forty years, has retired.

New officers elected by the stockholders of **Odom Machine Manufacturing Corp.**, Roswell, Ga., were: M. W. Odom, president; E. J. Simmons, vice-president; Marie Holloway, sec-

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great models
for
TESTING
MOISTURE
CONTENT
in wool, cotton, rayon and nylon

MODEL PD-1 for textiles in loose or compressible forms—3" penetration.

MODEL K-2 for textiles in cones, rolls, beams and similar forms.

10-DAY FREE TRIAL!

Try one of these moisture testing instruments for 10 days—use it, test it and prove its superiority. Send samples, moisture range and Purchase Order to cover trial period. No obligation!

QUICK, ACCURATE READINGS

In less than 3 seconds you can test moisture content of practically all types of textile materials, including cotton, wool, rayon and nylon in fabrics, packages and loose forms.

This portable instrument is designed for "on the spot" checks in your plant. Moisture Register is easy to operate—requires no technical knowledge or complicated figuring. Cost is negligible in comparison to advantages. Write today for complete details. Specify type of material to be tested.

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Mfd. by Moisture Register Co.

KALEPON W

When used as a *protective colloid* in the *bleaching, dyeing, carbonizing and stripping of wool* — it is like putting fire insurance on your mill.

KALEPON W is a degradation product of Albumin. It acts as a buffer against *acids, alkalies, peroxide* and *stripping agents.*

- **The wool has more life to it; is loftier even when dyed with *Immedial Leuco Colors*, in *alkaline* bath.**
- **There is no deterioration of *strength* and *elongation*. *Excellent* for dyeing *cops* or *cheeses* in machine.**
- **It *levels* the shade.**
- ***No royalties* to pay when using KALEPON W as a *protective colloid* for stripping wool.**

Send for technical data sheet.

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FOR OVER 25 YEARS A WATCHWORD IN SERVICE AND QUALITY

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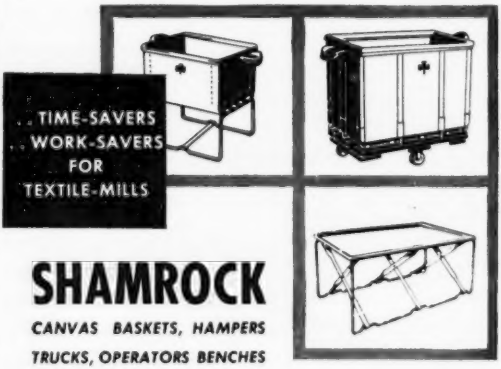

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retary and treasurer; E. C. Simmons, assistant secretary and treasurer; and G. L. Edwards, chief engineer and production manager.

Electric, mechanical, and pneumatic cloth guiders, reconditioned guiders, and guider rolls are being manufactured by **Guider, Roll and Service Co.**, P. O. Box 3747, Peninsula Station, Daytona Beach, Fla. Owner of the company which was established in 1946, is Robert Hetherington, founder of Hetherington, Inc., Sharon Hill, Pa., a manufacturer of military aircraft switches and control devices. Representatives of the company are: Joseph A. King with headquarters in N. Attleboro, Mass., covering the New England States and Canada; T. W. Kitchen of Greenville, S. C., covering the southern states.

SKF Industries, Inc., opened a new district office and warehouse at 1375 Spring St., N. W., Atlanta, Ga. Mortimer H. Courteney, with the firm for over 20 years, is district manager.

Raybestos-Manhattan, Inc., has announced the appointment of Harold H. Burrows as sales manager of the industrial rubber goods sales division. Charles P. McHugh has been made manager of the roll covering and tank lining production departments of the Manhattan Rubber Division.

C. G. Sargent's Sons Corp. is celebrating its 100th anniversary this year. The firm was established in June, 1852, by Charles G. Sargent, who designed and built, among other machines, the first American wool washer and automatic burr picker.

Morris S. Palmer has been made manager of field sales and Raymond F. Attner, Hancock valves product manager, at **Manning, Maxwell & Moore, Inc.**

Jenkins Metal Shops, Inc., Gastonia, N. C., has begun a "pick-up service" on work in central and northwest Georgia and the Valley section of Alabama. This service, operating from Atlanta, is under the direction of John S. Jenkins, Jr.

J. Carlisle Martin, with H & B American Machine Co. more than 30 years, has joined the Atlanta sales staff of **Whitin Machine Works.**

Russell B. Head has been appointed planning director for the **Westinghouse Electric Corp.** He will represent the planning committee in assisting the various Westinghouse operating divisions to make plans for new or additional product lines.

A. E. Staley Manufacturing Co. has established new sales offices at Cleveland and Philadelphia. Lyle H.

Mr. York

Mr. Reavis

York is manager of the Cleveland office, with Jack Krause as assistant. H. J. Reavis has been made manager of the Philadelphia office, assisted by Harold Hiser.

York Corp. has announced the promotion of William T. Harris to assistant to the southern district commercial sales manager, with headquarters at Atlanta, Ga. He succeeds A. H. Johnston, who resigned to become affiliated with Pittman-Singleton, Inc., York's distributor in Fayetteville, N. C.

SUPPLIERS News — WHAT THEY ARE DOING

Marion Woods has joined **Watson & Desmond** as a representative in South Carolina. The corporation of **Watson & Desmond, Inc.**, has been formed to handle textile mill properties and used machinery. S. P. V. Desmond is president; J. N. Dodgen, vice-president; Miss A. L. Patterson, secretary; and C. E. Watson, treasurer. The partnership of Watson & Desmond will continue as before, handling textile mill supplies and accessories.

General Dyestuff Corp. has announced the appointment of P. M. Kirk, formerly with General Aniline & Film Corp., as assistant sales manager in charge of direct sales of the firm's Antara Chemicals. T. R. Moore has been made assistant sales man-

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A TIME TESTED LINE

Engineered for Production

MILTON WARP BEAMS

for BROAD, NARROW FABRIC, RIBBON, VELVET, CARPET LOOMS

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For C & K Looms (pictured) and Draper Looms (with let-off gear). Steel barrels, cast iron flanges.

RIBBON LOOM BEAMS

Steel barrels, with your choice of adjustable head and fixed shaft (pictured) or fixed head with removable shaft.

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COMPARE these two tenter chain links. Top one, covered with baked-on grease and resin, is shown as it was removed from service. Bottom one, after only one hour and ten minutes of Oakite soak cleaning, is—and looks—as good as new. And the cleaning was easy—no volatile solvents, no laborious scraping—a minimum of downtime.

Try it on *your* tenter chains. Ask your local Oakite Technical Service Representative for *free* in-plant demonstration. Or write for *free* details. Oakite Products, Inc., 26C Rector St., New York 6, N. Y.

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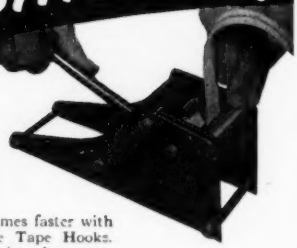
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. & Canada

10 TIMES FASTER THAN STITCHING!

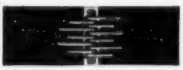


SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

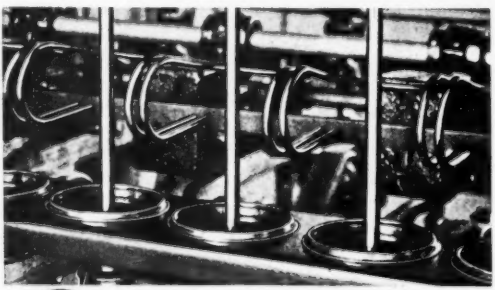
CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT



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Laboratory tests prove G-C Twister Ring grease doesn't melt at temperatures 40% higher than other greases. Regular mill users find it stays in rings up to 40 hours and longer. No throw-offs, no staining, no clogging. Even distribution, complete lubrication. Used for twisting any yarns. *SAMPLE GLADLY SENT ON REQUEST*

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Quality Lubricants G-C *Since 1919*

MACON GEORGIA

Non-melting oils for top rolls, comb boxes, looms and motors. Ben Boy non-melting greases for dry cans, slashers, calenders, dryers.

DRONSFIELDS' PATENT ATLAS BRAND EMERY FILLET

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THE PRINCIPAL MILL SUPPLY HOUSES AND CARD MAKERS

SUPPLIERS News
WHAT THEY ARE DOING

ager in charge of product line and sales service; Walter R. Brandt, market manager of textile, leather, and lake chemicals; J. M. Cloney, market manager of industrial chemicals. Robert M. True, formerly representative in Oregon and Washington, is now west coast manager, with headquarters at 37 Clementina St., San Francisco.

Morse G. Dial has been elected president of **Union Carbide and Carbon Corp.**, succeeding Fred H. Haggerson, now chairman of the board. The Carbide and Carbon Chemicals Co. division has announced the appointment of John S. McGilly as a technical representative in its textile fibers department. Mr. McGilly was formerly with the Sapphire Corp. Walter E. Remmers was elected vice-president in charge of the alloys division, and Kenneth H. Hannan was made treasurer.

Mr. McGilly

Brungart-Jennings, Inc., Birmingham, Ala., has been appointed exclusive dealer of the **Hyster Co.'s** line of lift trucks, mobile cranes, etc., for Alabama, except Chambers county; and northwest Florida. Newton Brungart and George Jennings head the new dealership.

Previously with American Agricultural Chemical Co., Bruce S. Galbraith is now technical sales representative of the Fungicide Division of **Nuodex Products Co., Inc.**

Industrial Products of America, 140 Market St., Paterson, N. J., dyeing, finishing, and printing equipment, have moved to larger quarters at the same address, which will give the firm more than three times the former amount of space.

Gordon W. Cameron, treasurer of **Aluminum Co. of America** since 1943, has been elected vice-president and treasurer; Arthur P. Hall becomes vice-president in charge of public relations and advertising; and C. F. Nagel, Jr., chief metallurgist, also has been elected vice-president.

Fontaine Converting Works, Martinsville, Va., and Lesem Bach & Co., New York City, have been granted liceses for the use of Avcoset, **American Viscose Corp.'s** new process for shrinkage and wear control.

Bagley & Sewall's slitter and rewinder division has been reorganized, the New York office closed, and all operations concentrated at Watertown, N. Y. Thomas Carter and Joseph Scheuermann have resigned.

The **Barrington Engineering Corp.** has moved its executive and sales office to 110 West 40th St., New York 18, N. Y.

Stephen A. Keller succeeds James H. Binger as general manager of the valve division of **Minneapolis-Honeywell Regulator Co.** Mr. Binger will continue as vice-president of the division.

Edward R. Ausley is now with the Atlanta, Ga., district office of **Allis-Chalmers Manufacturing Co.**, as an electrical service engineer.

Leonard Shapiro has been made manager of the **American Polymer Corp.'s** textile division which was recently established as part of the firm's program of expansion.

Mr. Shapiro

N. T. Gates has resigned from E. W. Twitchell Inc. and has formed the **N. T. Gates Co.** with offices in the Drexel Building, Philadelphia 6, Pa. Sales representative in New York City will be Fred Miller, while Bob Therrell and Rupe Aycock will cover the South for the new firm.

Harry M. Frecker has been made manager of commodity sales for the

Look...

No Sharp Corners
No Sharp Edges

. . . smooth Inside and Out . . . and permanently smooth! No snagged hands, no damaged yarn, and no danger of cutting, tearing, or gouging machinery or work.

Excel
Utility Truck
No. 1300

This EXCEL No. 1300 Truck is made of heavy 16 gauge non-rustable galvanized iron, metal locked and riveted, to outlast any ordinary truck.

Made to customers' specifications.
Thousands already in use.

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Mr. Paul Eurey.....Lincolnton, N. C.
Industrial Suppliers, Inc.
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Fall River Mill Supply Co.
Fall River, Mass.
Mr. Theodore Huston
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EXCEL
Textile Supply Co.

"Excel Trucks Excel"

LINCOLNTON, NORTH CAROLINA

NEWEST anti-static treatment for synthetics

DEXTROL

LEKTROSTAT®

DACRON BOWS TO LEKTROSTAT

Lektrostat B is the first anti-static chemical substantive to Dacron. 2%-3% of Lektrostat B, applied by exhaustion after dyeing, or by padding or spraying, effectively reduces static on Dacron and produces a definite softness—without affecting the color or the lightfastness of the dyestuffs. Samples and data on request.

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Cotton
4's to 30's

Viscose Rayon and Blends with
Orlon, Vicara and Dynel
18's to 30's, single and ply

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Precision-Built Kentex Aprons made to any specifications, on short notice. Write for free samples and prices. We are world's largest manufacturers of genuine leather textile aprons.

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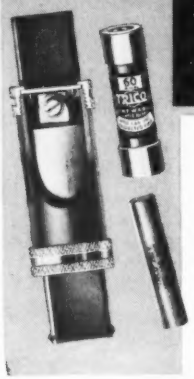
Insist on "TRICO" "Powder-Packed" RENEWABLE FUSES



The ONLY Renewable Fuse with a "Powder-Packed", CUSTOM-BUILT renewal element that cannot be "Doubled-Up" and cause damage to expensive motors and electrical equipment or create dangerous fire hazards. Also, TRICO renewal elements cannot be bent, fractured or twisted through handling, resulting in under-rating. You get 3 TIMES THE FUSE SERVICE with TRICO.

HERE ARE MORE ADVANTAGES OF TRICO "POWDER-PACKING":

- FULL LINK SUPPORT — no sagging, stretching or thinning out.
- EXPLOSIVE PRESSURES REDUCED—Powder granules provide arc barrier.
- CHOKES ARC AND HOT FLASHES—Protects expensive outer parts.
- CREATES EMERGENCY TIME-LAG — Handles sudden or surge overloads.

Get the COMPLETE story of ALL the money-saving features TRICO Renewable Fuses offer—

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TRICO OILERS

- Save Time — Save Oil — Save Worry

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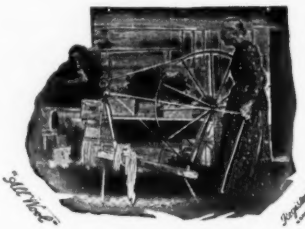

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SUPPLIERS News
WHAT THEY ARE DOING

mechanical goods division of **United States Rubber Co.** In the latex and dispersions sales department of the Naugatuck Chemical division, D. Leete Keefer has been transferred from Naugatuck, Conn., to Philadelphia, replacing Gerald L. Dennis, now Los Angeles branch manager. William J. Curtin succeeds Mr. Keefer in Naugatuck, and taking Mr. Curtin's place as assistant to the sales manager is Lawrence H. Bruce.

Five product divisions have been coordinated by **Rodney Hunt Machine Co.**, according to B. M. Jones, newly appointed general sales manager. H. F. Creegan is manager, textile machinery division; D. A. Kuniholm, manager of the industrial roll division; W. J. Simonds, assistant to the executive vice-president. Managers were also appointed for the firm's process equipment, water controlling apparatus, and water power equipment divisions.

Mr. Jones Mr. Creegan

William S. Johnstone, formerly with H & B American Machine Co., has joined **Standard Mill Supply, Inc.**, as sales representative in Georgia and South Carolina. J. Kenneth Sumner has been promoted to sales manager at the firm's Charlotte, N. C., office. Standard has been appointed southern representative for Anderson Machine Shops, J. E. Windle Co., Hall & Jannson Co., and Hewitt-Robbins, Inc.

Lewis C. Briggs, III, is now sales manager for **U. S. Bobbin & Shuttle Co.**

Hooker Electrochemical Co. has announced the appointment of Herbert J. Heesch as field sales engineer, with headquarters at Niagara Falls.

David S. Williams has been elected president of **Graton & Knight Co.**, succeeding his father, Arthur A. Williams, now chairman of the board. Alex Reikes, formerly at the firm's home office, has been appointed manager of the San Francisco branch, succeeding John N. Daniels, resigned. Frank A. Brede has joined the firm as chief engineer, transmission and development, in the research and development department.

A. M. Sheldon was recently elected chairman of the board of directors of **Union Special Machine Co.**, and W. S. North was elected president and general manager. W. R. Whitson has replaced Steve Yambor as representative in the Scranton, Wilkes Barre, Pa., and adjoining territory. He was formerly assistant in the Newark territory, and will continue in this capacity.

Frederick J. Barrows, formerly in the New England territory, has been transferred to the Atlanta, Ga., sales office of **Universal Winding Co.** He will assist Jesse W. Stribling in serving mills in the southeastern states.

The Gray Co., Inc., has opened a regional office and warehouse at 1223 Spring St., N. W., Atlanta, Ga. Southeastern district manager is Thomas Bruce.

The factoring firm of **Joel Hurt & Co.** has been formed, with offices at 101 Marietta St., Atlanta, Ga. Joel Hurt is president and treasurer;

Mr. Hurt Mr. Neal

Thomas E. Neal, vice-president; and William A. McClain, secretary. The firm will specialize in service to the textile industry in the South, according to Mr. Hurt.

The Foxboro Co. has established offices in Decatur, Ala., with C. A. Mohler in charge, and in Greenville, S. C., with W. W. Barron in charge. Succeeding Mr. Barron in the Atlanta, Ga., office is E. W. Prendergast, and F. H. Leathers has been added to the staff. L. B. Perry has been added to the Birmingham office; the Jacksonville office is now under the direction of R. M. Schneble, as-

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J. O. Ross Engineering Corp.'s New Plant.

Plant No. 3 of **J. O. Ross Engineering Corp.** was opened on April 12 at Highland Park, N. J., with appropriate ceremonies. Among the guests were company officials and managers of the firm's various offices. The new plant, costing over $1,000,000, will add more than 75,000 sq ft to the company's present manufacturing facilities.

sisted by J. L. Pierce. New in the Charlotte office is H. A. Ruddock, sales engineer.

William H. Steinkamp has been appointed general sales manager of the industrial division of **Minneapolis-Honeywell Regulator Co.**, with O. B. Wilson succeeding him as field sales manager. Twenty-six sales engineers have been added to the field sales staff.

Thackston & Redding, Inc., Spartanburg, S. C., has been appointed southern agent of the **H. J. Theiler Corp.**, Whitinsville, Mass., for the following Swiss-made machines: the "Robot" automatic reed and heddle cleaning machine by Sam Vollenweider Ltd.; the Staubli dobby head and card punching machines; and the Staubli shuttle truing machine.

Frank B. Lutz and Charles H. Apperson have joined the research department of **The Chemstrand Corp.** at Decatur, Ala. Mr. Lutz was formerly with Millville Manufacturing Co., and Mr. Apperson was employed by Tennessee Coal & Iron Co.

Ray W. Ousley, formerly with J. P. Stevens Co., Inc., in Cheraw, S. C.,

Mr. Ousley

has joined the sales staff of **Gastonia Roller, Flyer and Spindle Co.** of Gastonia, N. C.

Cleaver-Brooks Co. has announced the appointment of Harold F. Holtz as sales manager of the boiler division. He succeeds R. J. Tutsch, who has formed a manufacturing agency partnership with T. P. Dyke to handle Cleaver-Brooks equipment in southern Wisconsin.

Vernon L. Johnson, formerly with the Studebaker Corp., has joined **Clark Equipment Co.** as sales manager of the firm's northeastern region.

Dr. Henry L. Cox has been elected vice-president in charge of the chemical division of **Corn Products Refining Co.**, with headquarters in Argo, Ill.

Dewey and Almy Chemical Co. has announced the election of T. T. Miller as vice-president in charge of marketing, and George W. Blackwood as vice-president and general sales manager.

Fisher & Rudge, management consultants, have merged with Thomas F. Neblett of Los Angeles, to form a national organization to be known as **Fisher, Rudge & Neblett.** New York headquarters are at 250 Park Avenue.

E. I. du Pont de Nemours & Co. Inc. plan to mark their 150th anniversary on July 18 with ceremonies at the sight of the first Du Pont powder mills on the banks of the Brandywine Creek a few miles from Wilmington. A marker, formed by one of two huge millstones ordered from France by the founder of the firm in 1801, will be dedicated by Walter S. Carpenter, Jr., chairman of the board of directors.

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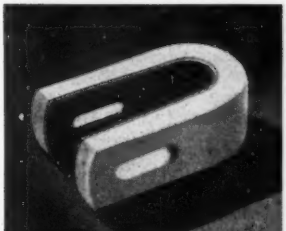

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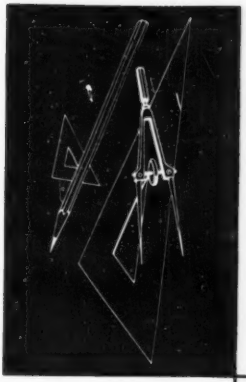

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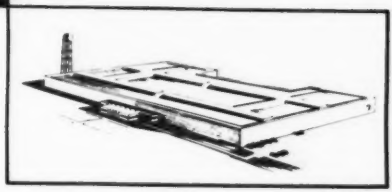

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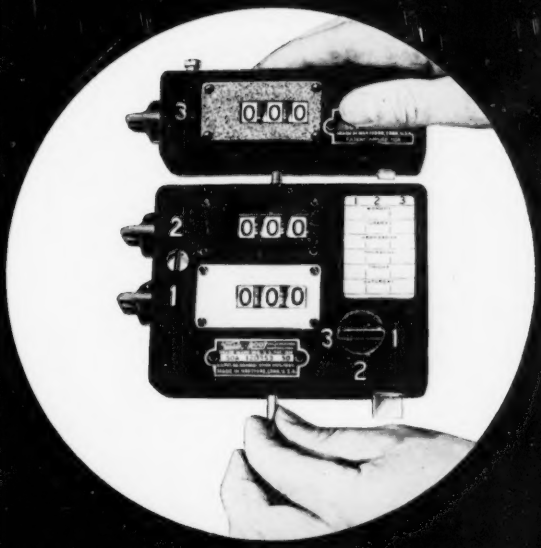

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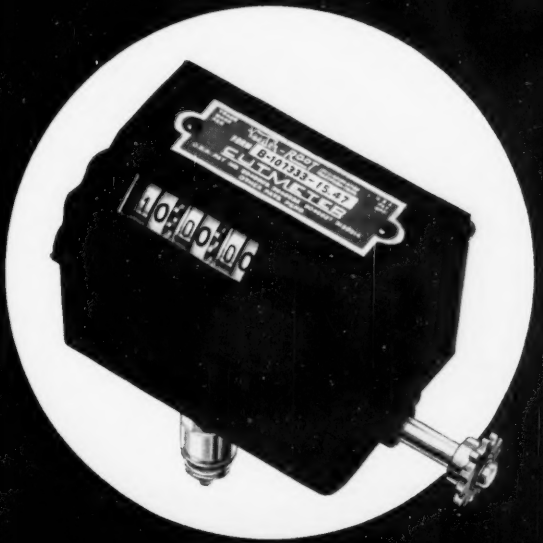

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